DRAFT

# *Bavayia crassicollis - Roux, 1913*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Bavayia - crassicollis

**Common Names:** Bavayia des Rivages (French), Strand Bavayia (English)
**Synonyms:** Bavayia cyclura crassicollis Roux, 1913 ;

**Taxonomic Note:**
Recent genetic data indicates that populations at Île des Pins and on the islets near there and the east coast of Grande Terre that were earlier assigned to *Bavayia crassicollis* are not this taxon and that all geckos in the Îles Loyauté that were previously assigned to *Bavayia cyclura* are in fact *Bavayia crassicollis*.

## Red List Assessment

| Red List Status |
|---|
| DD - Data Deficient, (IUCN version 3.1) |
| DD Reason: |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Cox, N. & Tognelli, M.F.

### Assessment Rationale

Although *Bavayia crassicollis* has been recorded at widespread sites on Maré and Lifou—and the extent of occurrence, area of occupancy and threatening processes are indicative of VU —there is too little known at present about occurrence, population size and trends, and threats to accurately assign a conservation status. Hence, it is listed as Data Deficient.

## Distribution

### Geographic Range

*Bavayia crassicollis* is endemic to Province des Iles, New Caledonia. The species is confined to Îles Loyauté; confirmed only from Maré and Lifou. It appears to be widespread on Maré and Lifou, but its occurrence on Ouvéa,

Tiga and other smaller islands is unknown. It occurs at elevations of up to 150 m. The extent of occurrence is approximately 1,850 km² (estimated from the area of the islands).

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 150

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

The global population size and trends are not known. However, it is presumed to have suffered past declines in population size and extent of occurrence through habitat loss from clearance for occupation and agriculture, and predation by introduced species.

# Habitats and Ecology

*Bavayia crassicollis* inhabits supralittoral vegetation, and coastal and humid forests. It is nocturnal and arboreal. It shelters during the day in tree holes, beneath loose bark and in dense vegetation, and forages at night on trunks and branches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The main threats to *Bavayia crassicollis* include loss and degradation of habitat arising from forest clearance for agriculture and wildfires, particularly when these result in habitat fragmentation. Predation by introduced mammals (rodents and feral cats) is also an issue, and there are potentially serious impacts from the introduced ant *Wasmannia auropunctata*, especially in humid forests.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is not present in any reserves and no active specific conservation management is currently being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 1997. The terrestrial herpetofauna of the Loyalty Islands. *Pacific Science* 51: 76-90.

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Bavayia cyclura - (Günther, 1872)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Bavayia - cyclura

**Common Names:** Bavayia des Forêts (French), Forest Bavayia (English), Gunther's New Caledonian Gecko ()
**Synonyms:** Peripia cyclura Günther, 1872 ; Lepidodactylus neocaledonicus Bocage, 1873 ; Platydactylus pacificus Bavay, 1869 ;

**Taxonomic Note:**
Recent genetic data shows that, as presently defined, *Bavayia cyclura sensu* Günther 1872 comprises at least ten cryptic species all of which have relatively confined, largely allopatric ranges. It also shows that material from the Îles Loyauté that was previously assigned to *Bavayia cyclura* is in fact *Bavayia crassicollis*.

# Red List Assessment

| Red List Status |
| --- |
| DD - Data Deficient, (IUCN version 3.1)<br><br>DD Reason: |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier R.A.

**Reviewer(s):** Cox, N. & Tognelli, M.F.

## Assessment Rationale

*Bavayia cyclura s.l.* is listed as Data Deficient because its taxonomic status is uncertain. Recent genetic data suggests that this may be a species complex. It is worth noting that once the revision of the *Bavayia cyclura* complex is complete that many of the putative taxa are likely to be assigned threatened status because they have a small extent of occurrence and area of occupancy and many occur in lowland or coastal habitats that, by virtue of long-term human occupancy, are among those most severely modified.

# Distribution

## Geographic Range

*Bavayia cyclura s.l.* is endemic to New Caledonia. It occurs throughout Grande Terre and its satellite islands, and on Ile des Pins and neighbouring islets. It has also been reported from Ouvéa in the Îles Loyauté (*Bavayia cyclura s.s.* is confined to the central west coast of Grande Terre between Bourail and Tontouta). The greatest diversity of cryptic taxa is in Province Nord. It occurs at elevations of up to 900 m.

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size or trends for *Bavayia cyclura s.l.* but it has clearly suffered a substantial reduction in population size and extent from past habitat loss and degradation through clearance for agriculture, mining and afforestation, and from wildfires. This has been particularly acute on the west coast where most of the sclerophyll forests have been removed in the conversion to ranchland. Habitat loss and degradation is on-going with the further clearance, frequent wildfires and the damage caused by introduced ungulates (deer and pigs). Nonetheless, *Bavayia cyclura s.l.* remains common at some locations with good habitat.

# Habitats and Ecology

*Bavayia cyclura s.l.* inhabits a very wide range of wooded habitats including mangroves, supralittoral vegetation, and coastal, sclerophyll, humid and montane forests. This species is nocturnal and arboreal. It shelters during the day in tree holes, beneath loose bark and in dense vegetation, and forages at night on trunks and branches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Mangrove Vegetation Above High Tide Level | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The significance of the various threats facing *Bavayia cyclura s.l.* vary across its range and between habitats but they include further loss of forested habitat, degradation of habitat by wildfires and introduced ungulates (deer and pigs), issues arising from habitat fragmentation, and predation by introduced mammals (rodents and feral cats). Afforestation is likely to have a localised impact, mainly at mid-elevation sites. Of particular concern is spread of *Wasmannia auropunctata*, especially in low to mid-elevation forests, as this invasive ant species is known to have serious detrimental impacts on lizards (Jourdan *et al.* 2000, 2001).

## Conservation

Until the taxonomy of the *Bavayia cyclura* species complex is resolved it is impossible to say which taxa occur in protected habitats, although across the country as a whole *Bavayia cyclura s.l.* is well represented in reserves. No active conservation management is currently being undertaken for any populations.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Bavayia goroensis - Bauer, Jackman, Sadlier, Shea & Whitaker, 2008*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Bavayia - goroensis

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| EN - Endangered, B1ab(iii) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier R.A.

**Reviewer(s):** Cox, N. & Tognelli, M.F.

## Assessment Rationale

This species is listed as Endangered because it is restricted to two locations in New Caledonia (known from five individual sites), and there are ongoing threats to its habitat. One subpopulation is potentially threatened by expanding mining activities (as well as in habitat between known sites). Decline is probably about 10-15% of overall habitat. At present, none of the sites where the species occurs are protected. Other potential threats that may affect this species are wildfires and invasive species.

# Distribution

## Geographic Range

*Bavayia goroensis* is endemic to Province Sud in New Caledonia. It is known only from the Goro Plateau - Plaine des Lacs region in the extreme southeast of Grande Terre. It is known from at least five sites. The species is likely found in appropriate habitat in intervening area. It occurs at elevations between 200 m and 300 m. The extent of occurrence is estimated to be 57 km² (estimated from range map).

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 200

**Elevation Upper Limit (in metres above sea level):** 300

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size or trends. It is presumed that the past wildfires and logging that have affected large parts of the Plaine des Lacs region have reduced the extent of habitat for *Bavayia goroensis* and led to a

reduction in and fragmentation of the population. Afforestation projects may also have removed habitat. The development of a large new nickel mine in the area is causing further habitat loss.

# Habitats and Ecology

This species occurs in maquis shrubland (including maquis arbustif and maquis paraforestier) and humid forest. It is nocturnal and arboreal. It shelters by day in tree holes and beneath loose bark and forages at night in the canopy.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The most serious threat to *Bavayia goroensis* is the rapidly expanding nickel industry in the south which will result in the loss of substantial areas of its habitat and isolation of any remaining populations. Wildfires are also a major threat in the maquis habitats. Other issues are habitat degradation by introduced ungulates (deer and pigs) and predation by introduced mammals (rodents and feral cats). It is also expected that the introduced ant, *Wasmannia auropunctata*, which is now present in most forests in the area, will have detrimental impact as it is known to decimate lizard populations (Jourdan *et al*. 2000, 2001). A further problem in the south is the conversion of maquis shrublands to exotic forestry plantations.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). Not listed on CITES. This species is not present in any reserves and no species-specific conservation management is currently being undertaken. Further research is needed into the distribution, habitat status, and threats to this species. As habitat degradation is impacting this restricted species, protected areas should be considered to help reduce the degree of threat. Monitoring is also necessary as if threats continue, significant declines may occur increasing the extinction risk of this species.

# Bibliography

Bauer, A.M., Jackman, T., Sadlier, R.A., Shea, G., Whitaker, A.H. 2008. A new small-bodied species of *Bavayia* (Reptilia: Squamata: Diplodactylidae) from southeastern New Caledonia. *Pacific Science* 62: 247–256.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

# *Bavayia madjo - Bauer, Jones & Sadlier, 2000*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Bavayia - madjo

**Common Names:** Bavayia d'altitude (French), High Elevation Bavayia (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| NT - Near Threatened, (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Cox, N. & Tognelli, M.F.

### Assessment Rationale

Although *Bavayia madjo* is known from only two localities, it is listed as Near Threatened because it occurs in a protected area and the potential suitable habitat is very large and the risk of habitat loss or degradation is very low. There are established populations of naturalized predators (e.g. rodents and cats) within the range of this gecko, but it is not known if they have an impact on its population. Further information on population size and trends is needed, as well as on the threats to this species to determine whether it should be listed in a higher threatened category.

## Distribution

### Geographic Range

*Bavayia madjo* is endemic to Province Nord, New Caledonia. It is known only from the Panié massif in north-eastern Grande Terre. This species has been recorded at just two localities, Mt Ignambi and Mt Panié, but it is expected to be widely distributed along the massif between these two sites as the habitat is continuous and relatively undisturbed. It occurs at elevations above 850 m. The extent of occurrence is approximately 225 km², and the area of occupancy is estimated at 2 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 850

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on present population density or trends for this species.

# Habitats and Ecology

This species inhabits closed montane forest. It is nocturnal and presumed to be arboreal, sheltering by day beneath loose bark and in tree or rock crevices.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

Rodents and feral cats are common throughout the Panié massif and are expected to exert a predation pressure on *Bavayia madjo*. Habitat degradation is also occurring from introduced ungulates (deer and pigs), but otherwise the high elevation forests of the Panié massif are amongst the least modified and most secure in New Caledonia.

## Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is present in the Réserve de Nature Sauvage du Mt Panié. No conservation management is currently being undertaken, but this species may potentially benefit from proposed predator control in the La Guen catchment on Mt Panié.

## Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Bauer, A.M., Jones, J.P.G., Sadlier, R.A. 2000. A new high-elevation *Bavayia* (Reptilia: Squamata: Diplodactylidae) from northeastern New Caledonia. *Pacific Science* 54: 63–69.

DRAFT

# *Bavayia montana - Roux, 1913*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Bavayia - montana

**Common Names:** Bavayia des Montagnes (French), Montane Bavayia (English)
**Synonyms:** Bavayia cyclura montana Roux, 1913 ;

**Taxonomic Note:**
Recent genetic data shows that, as presently defined, *Bavayia montana sensu* Roux 1913 comprises a complex of at least six cryptic species all of which have relatively confined, largely allopatric ranges.

## Red List Assessment

| Red List Status |
| --- |
| DD - Data Deficient, (IUCN version 3.1) |

DD Reason:

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Cox, N. & Tognelli, M.F.

## Assessment Rationale

*Bavayia montana s.l.* is listed as Data Deficient because its taxonomic status is uncertain. Recent genetic data suggests that this may be a species complex. It is worth noting that once the revision of the species complex is complete, many of the putative taxa are likely to be assigned threatened status because they have a small extent of occurrence and area of occupancy, and some occur on massifs that are or potentially will be affected by nickel mining.

# Distribution

## Geographic Range

*Bavayia montana s.l.* is endemic to New Caledonia. It is present along the main mountain ranges of Grande Terre from the Panié massif in the north-east (northernmost locality is Mt Mandjélia) to Mé Adéo, east of Bourail. Outlying populations are on the isolated ultramafic massifs of Koniambo and Taom in the north-west. A record from Mt Vulcain requires confirmation. (*Bavayia montana s.s.* is restricted to Mt Panié, Tchingou and Taom). The greatest diversity of cryptic taxa is in Province Nord. It occurs at elevations between 80 m and 900 m. The extent of occurrence of *Bavayia montana s.l.* is approximately 8,000 km², whereas for *Bavayia montana s.s.* is approximately 400 km². The area of occupancy is estimated at < 1,000 km² for *Bavayia montana s.l.* and < 100 km² for *Bavayia montana s.s.*

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 80

**Elevation Upper Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size or trends for *Bavayia montana s.l.* but it is expected there have been reductions in population size and extent from past habitat loss and degradation resulting from clearance for agriculture, logging and afforestation (low to mid-elevation), mining (high elevation) and from wildfires. Habitat loss and degradation is on-going with the further clearance, frequent wildfires and the damage caused by introduced ungulates (deer and pigs). *B. montana s.l.* is relatively common at some locations with good habitat.

# Habitats and Ecology

*Bavayia montana s.l.* inhabits closed humid forest at low to mid-elevation and montane forest. It is nocturnal, arboreal and it shelters during the day in tree holes and crevices, beneath loose bark and crevice in rock banks and outcrops. It forages at night on trunks and branches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The greatest threat to taxa in the *Bavayia montana* complex is from habitat loss and degradation due to the expansion of the nickel mining industry across most of the ultramafic massifs and from wildfires encroaching into forest habitat from adjacent maquis shrublands. Habitat degradation by introduced ungulates (deer and pigs) is a further threat, as is predation by introduced mammals (rodents and feral cats). The spread of the invasive ant *Wasmannia auropunctata* through low to mid-elevation forests is a major concern and is expected to have a serious impact on populations (Jourdan *et al.* 2000, 2001).

# Conservation

Until the taxonomy of the *Bavayia montana* species complex is resolved it is impossible to say which taxa occur in protected habitats, although within Province Nord *Bavayia montana s.l.* is at least present in Réserve de Nature Sauvage du Mont Panié and Réserve de Nature Sauvage du Massif de l'Aoupinié. No active conservation management is currently being undertaken for any populations.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Bavayia ornata - Roux, 1913*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Bavayia - ornata

**Common Names:** Bavayia orné (French), Ornate Bavayia (English)
**Synonyms:** Bavayia sauvagei ornata Roux, 1913 ;

**Taxonomic Note:**
There is significant genetic divergence between the known populations on Mt Panié and Tchingou.

## Red List Assessment

| Red List Status |
|---|
| EN - Endangered, B1ab(i,ii,iii,v)+2ab(i,ii,iii,v) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Endangered because it occurs in only two locations and there is continuing decline in the extent of occurrence, area of occupancy, extent and quality of habitat and number of mature individuals. The isolation and genetic divergence of the populations on Mt Panié and Tchingou indicates that they should be treated as separate conservation management units.

# Distribution

## Geographic Range

*Bavayia ornata* is endemic to Province Nord, New Caledonia. It is known only from two massifs in the north of Grande Terre—Mt Panié and Tchingou. It occurs at elevations between 300 m and 1,000 m. The extent of occurrence is approximately 500 km², and the area of occupancy is estimated to be < 150 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 300

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no data on population density or trends for *Bavayia ornata*. It is presumed to have suffered some reduction in range and population size as a result of habitat loss on the lower slopes of the Panié massif through wildfires and clearance for agriculture, and at higher elevation on Tchingou from wildfires and mining. However, this species remains common at some locations.

# Habitats and Ecology

*Bavayia ornata* inhabits closed humid forests at mid-elevation and montane forests. It is nocturnal, arboreal or terrestrial on rock faces. It shelters by day beneath stones and logs and at night it climbs into subcanopy trees and shrubs or forages on rock faces.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

Rodents and feral cats are common throughout the range of *Bavayia ornata* and are expected to exert a predation pressure. Wildfires are a recurrent threat on the lower slopes of the Panié massif and perhaps less of a risk on Tchingou, and these are likely to affect some habitat by damaging forest margins. Habitat degradation from introduced ungulates (deer and pigs) is widespread. The introduced ant *Wasmannia auropunctata* is present in low-elevation forests on Mt Panié and is anticipated to have a severe impact as it is known to decimate lizard populations (Jourdan *et al*. 2000, 2001). A potentially serious threat to Tchingou is that nickel mining may resume on the massif with consequent loss of habitat.

# Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is present in the Réserve de Nature Sauvage du Mt Panié. No conservation management is currently being undertaken but this species may potentially benefit from proposed predator control in the La Guen catchment on Mt Panié.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

# *Bavayia robusta - Wright, Bauer & Sadlier, 2000*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Bavayia - robusta

**Common Names:** Robust forest bavayia (English), Bavayia robuste des forêts (French)
**Synonyms:** No Synonyms

**Taxonomic Note:**
*Bavayia robusta* is one of the few taxa within the *Bavayia cyclura* complex that has been formally described. Even so, the distinction between *Bavayia robusta s.s.* and populations putatively assigned to it from Île des Pins and its satellite islands still requires clarification. The specific status of some individual populations in the extreme southeast of Grande Terre and on Île des Pins is also equivocal.

## Red List Assessment

| Red List Status |
| --- |
| NT - Near Threatened, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Bavayia robusta* is listed as Near Threatened because the extent of occurrence is well below the threshold under criterion B and the populations are becoming increasingly fragmented due to habitat loss to development, wildfires, and the expanding mining industry. This species does not qualify for a threatened category yet because it is known from a relatively large number of locations and is abundant at some of them, and there are large areas of potential habitat that have not been surveyed.

# Distribution

## Geographic Range

*Bavayia robusta* is endemic to Province Sud, New Caledonia. It occurs in Île des Pins and satellite islands. Its northernmost locality is Dumbea. It occurs at elevations of up to 500 m. The extent of occurrence is approximately 1150 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 500

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size or trends for *Bavayia robusta* but it remains abundant at some localities and has been able to colonise some modified environments (e.g. acacia woodlands). Presumed to have suffered a substantial reduction in population size and extent from past habitat loss and degradation, primarily through clearance for occupation and agriculture but also including wildfires and degradation by introduced ungulates (deer and pigs) and livestock.

The rapid expansion of Nouméa and outlying suburbs is causing ongoing habitat loss across much of the species' range.

# Habitats and Ecology

*Bavayia robusta* occurs in a wide range of wooded habitats including mangroves, coastal forest, sclerophyll forest and closed humid forest at low to mid-elevations. It is nocturnal and arboreal. It shelters by day in tree holes and crevices and beneath loose bark and forages at night to canopy height.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Mangrove Vegetation Above High Tide Level | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The primary threat to *Bavayia robusta* is loss of habitat. This loss will be particularly acute in mangroves and other coastal habitats which are under threat from urbanisation, and for the isolated closed forest remnants in the Grand Sud that are at risk to the rapidly expanding nickel mining industry. Other threats to this species include further loss or degradation of habitat from wildfires and the effects of introduced ungulates (deer and pigs), and predation by introduced mammals (rodents and feral cats). The introduced ant, *Wasmannia auropunctata*, is anticipated to have a detrimental impact on *B. robusta* as it is known to decimate lizard populations (Jourdan *et al.* 2000, 2001).

# Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). *Bavayia robusta* is present in Parc Provincial de la Rivière Bleue and at least two reserves (Forêt Cachée and Forêt Nord). No conservation management is currently being undertaken.

# Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Wright, J.L., Bauer, A.M. and Sadlier, R.A. 2000. Two new gecko species allied to *Bavayia sauvagii* and *Bavayia cyclura* (Reptilia : Squamata : Diplodactylidae) from New Caledonia. *Pacific Science* 54: 39-55.

DRAFT

# *Bavayia sauvagii - (Boulenger, 1883)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Bavayia - sauvagii

**Common Names:** Bavayia de Sauvage (French), Sauvage's Bavayia (English)
**Synonyms:** Lepidodactylus sauvagii Boulenger, 1883 ;

**Taxonomic Note:**
Recent genetic data shows that, as presently defined, *Bavayia sauvagii* sensu Boulenger 1883 comprises a complex of at least nine cryptic species that appear to mostly have relatively confined, allopatric ranges.

## Red List Assessment

| Red List Status |
|---|
| DD - Data Deficient, (IUCN version 3.1) |
| DD Reason: |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

*Bavayia sauvagii s.l.* is listed as Data Deficient because of its uncertain taxonomic status, as it is a species complex. It is worth noting that once the revision of the *Bavayia sauvagii* complex is complete, many of the putative taxa are likely to be assigned threatened status because they have a small extent of occurrence and area of occupancy and some are at risk to specific threatening processes at specific (e.g. nickel mining).

## Distribution

### Geographic Range

*Bavayia sauvagii* is endemic to New Caledonia. It is present throughout Grande Terre, except the far north (northernmost localities are Mt Kaala in the west and Mt Ignambi in the east); Ile des Pins and its satellite islands; and Iles Loyauté (only Maré) (*Bavayia sauvagii s.s.* occurs only in the southwest of Grande Terre between Mt Do and Mt Koghis/Yahoué Valley). An equal diversity of cryptic taxa is in Province Nord and Province Sud. It occurs at elevations of up to 900 m. The extent of occurrence of *Bavayia sauvagii s.l.* is approximately 15,500 km², whereas for *Bavayia sauvagii s.s.* is approximately 1,500 km². The area of occupancy is estimated at < 10,000 km² for *Bavayia sauvagii s.l.* and < 800 km² for *Bavayia sauvagii s.s.*

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size or trends for *Bavayia sauvagii s.l.* However, it is presumed to have suffered a substantial reduction in population size and extent from past habitat loss and degradation through clearance for agriculture, mining and afforestation, and from wildfires.

# Habitats and Ecology

This species occurs in a wide range of wooded habitats including littoral vegetation, coastal forest, sclerophyll forest and closed humid forests at low to mid-elevation and montane forests; occasionally in adjacent maquis shrublands. It is nocturnal; arboreal or terrestrial. It prefers sites with a rocky forest floor, sheltering by day beneath stones or leaf litter and foraging at night in subcanopy vegetation.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Dry | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The significance of the various threats facing *Bavayia sauvagii s.l.* vary across its range and between habitats, but they include loss of forest habitat, degradation of habitat by wildfires and introduced ungulates (deer and pigs), problems caused by habitat fragmentation, and predation by introduced mammals (rodents and feral cats). The impact of habitat loss has been greater at low elevation, particularly on the west coast where most of the sclerophyll forest has been removed and converted to ranchland. Afforestation is likely to have a localised impact, mainly at mid-elevation sites, and a few populations along the axial ranges may be affected by logging. Mining is also expected to have localised impacts, particularly in the Grand Sud where isolated forest patches will be destroyed. The invasive ant *Wasmannia auropunctata* presents a high level of threat in low to mid-elevation forests as it is known to have serious detrimental impacts on lizards (Jourdan *et al.* 2000, 2001).

## Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). Until the taxonomy of the *Bavayia sauvagii* species complex is resolved it is impossible to say which taxa occur in protected habitats, although across the country as a whole *Bavayia sauvagii s.l.* is well represented in reserves. No active conservation management is currently being undertaken for any populations.

## Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Wright, J.L., Bauer, A.M. and Sadlier, R.A. 2000. Two new gecko species allied to *Bavayia sauvagii* and *Bavayia cyclura* (Reptilia : Squamata : Diplodactylidae) from New Caledonia. *Pacific Science* 54: 39-55.

DRAFT

# *Bavayia septuiclavis - Sadlier, 1989*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Bavayia - septuiclavis

**Common Names:** Bavayia à bande pâle (French), Pale-stripe bavayia (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| NT - Near Threatened, (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

*Bavayia septuiclavis* is listed as Near Threatened because the extent of occurrence is well below the threshold under criterion B and the populations in the south are highly fragmented and isolated and at high risk from wildfires and the expanding mining industry. However, this species does not qualify for a threatened category yet because it is known from a relatively large number of locations and is abundant at some of them, and there is extensive potential habitat along the main ranges.

## Distribution

### Geographic Range

*Bavayia septuiclavis* is endemic to Province Sud, New Caledonia. It occurs in the southern portion of Grande Terre (northernmost locality is Mt Vulcain, Tontouta Valley). It occurs at elevations between 10 m and 900 m. The extent of occurrence is approximately 2,200 km², and the area of occupancy is estimated to be < 1,000 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the

islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 10

**Elevation Upper Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size or trends for *Bavayia septuiclavis*. Within its known range there has been extensive loss of humid forest and modification to maquis habitats from a wide range of causes including wildfires and clearance for occupation, agriculture, afforestation, logging and mining. As a result, away from the main ranges, the remaining populations are fragmented and localised. The species is locally abundant at many sites.

# Habitats and Ecology

*Bavayia septuiclavis* inhabits closed humid forests, tall canopied maquis (maquis paraforestier), and on the Plaine des Lacs adjacent areas of maquis shrublands, it also has been recorded from montane forests. This species is nocturnal and arboreal, sheltering by day beneath stones, logs and leaf litter and foraging at night in sub-canopy trees and shrubs.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Marginal | - |

## Systems

**System:** Terrestrial

## Threats

The loss of closed forest habitat is the greatest threat to *Bavayia septuiclavis* and in the southern part of its range this will result from the rapidly expanding nickel mining industry in the Grand Sud. Loss of habitat to mining activities is also a problem in the Tontouta Valley. Other threats include the loss or degradation of habitat from wildfires and the effects of introduced ungulates (deer and pigs), and predation by introduced mammals (rodents and feral cats). At low elevation sites the occurrence of the introduced ant, *Wasmannia auropunctata*, in closed forest habitats is expected to have a detrimental impact as it has been shown to decimate lizard populations (Jourdan *et al*. 2000, 2001). An additional threat in the south is the increasing area of indigenous vegetation being converted to exotic forestry.

## Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 Octber 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). *Bavayia septuiclavis* is present in Parc Provincial de la Rivière Bleue and a number of other reserves in the south, including Mont Koghis, Forêt Cachée, Pic du Pin, Pic du Grand Kaori and Forêt Nord. No active conservation management is being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A. 1989. *Bavayia validiclavis* and *Bavayia septuiclavis*, two new species of gekkonid lizard from New Caledonia. *Records of the Australian Museum* 40: 365–370.


DRAFT

# *Eurydactylodes agricolae - Henkel & Böhme, 2001*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Eurydactylodes - agricolae

**Common Names:** Bauer's Chameleon Gecko ()
**Synonyms:** No Synonyms

**Taxonomic Note:**

# Red List Assessment

| Red List Status |
| --- |
| NT - Near Threatened, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

Although its distribution is below the threshold for extent of occurrence and area of occupancy for Vulnerable, it occurs at well over 10 locations, has a total population significantly in excess of 10,000 individuals, and the reduction in its population size is expected to be much less than 30%. However, given the current rate of expansion of nickel mining, the status of this species needs to be monitored as it could change rapidly and require re-assignment to a higher threat level. Therefore, *Eurydactylodes agricolae* is listed as Near Threatened.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It occurs in Northern Grande Terre, from Tinip and Mt Taom on the west coast and the Panié massif on the east coast, northwards to the Poum massif. Also on the Iles Belep and Ile Yandé. It appears to be parapatric with *Eurydactylodes vieillardi*. It occurs at elevations of up to 1,000 m. The extent of occurrence is approximately 2,900 km², and the area of occupancy is estimated at < 1,000 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

The combined effects of clearance for agriculture and wildfires have resulted in the loss of most lowland maquis, sclerophyll forest and closed forests across the entire range of *Eurydactylodes agricolae*, and at higher elevations past mining activities and wildfires have similarly reduced habitat extent. As a consequence the remaining populations are fragmented and patchy in occurrence. The current expansion of nickel mines on Poum, Dôme de Tiébaghi, Kaala and Taom is further reducing the area of occupied habitat. There are no quantitative data on population size or trends but at many localities *Eurydactylodes agricolae* is still abundant and the most common gecko species present.

# Habitats and Ecology

This species inhabits a very wide range of wooded habitats including maquis shrublands, sclerophyll forest, gallery forest, closed humid forest and montane forest. It is arboreal; at least partly, possibly primarily diurnal. It appears to remain on twigs and foliage all the time rather than seeking cover during periods of inactivity.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Dry | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Dry | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The major threat to *Eurydactylodes agricolae* is the current expansion of the nickel mines on Poum, Dôme de Tiébaghi, Kaala and Taom as these are removing the maquis habitat of the highest density populations. Wildfires are a recurrent threat in maquis and dry forest habitats the western part of this species' range and on the islands. Habitat degradation from introduced ungulates (deer and pigs) occurs throughout, plus there are local impacts from livestock (e.g. cattle at Rivière Nehoué). Rodents and feral cats occur throughout the range of *Eurydactylodes agricolae*—and are abundant at many sites—and they are expected to exert a predation pressure. The invasive ant, *Wasmannia auropunctata*, occurs at most low-elevation sclerophyll and closed forest sites inhabited by *Eurydactylodes agricolae* and is expanding into maquis habitats as well. The impact of these ants on *Eurydactylodes agricolae* is not known but it is expected to be detrimental (Jourdan *et al*. 2000, 2001). The distinctive chameleon-like appearance of this species and its diurnal activity make it a potential target for illegal collection and trafficking.

## Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). A small part of the habitat of *Eurydactylodes agricolae* at Rivière Nehoué is administered as a recreation reserve but it receives high human use. Two areas on the upper part of Dôme de Tiébaghi are unofficially set aside as botanical reserves but to date *Eurydactylodes agricolae* has been recorded in only one of them. No conservation management is currently being undertaken.

## Bibliography


Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2009. Review and phylogeny of the New Caledonian diplodactylid gekkotan genus *Eurydactylodes* Wermuth, 1965, with the description of a new species. *Zoologia Neocaledonica 7, Mémoires du Muséum National d'Histoire Naturelle* 198: 13–36.

Henkel, F.W., Böhme, W. 2001. A new carphodactyline gecko of the New Caledonian genus *Eurydactylodes* (Sauria: Gekkonidae). *Salamandra* 37: 149–150.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Eurydactylodes occidentalis - Bauer, Jackman, Sadlier & Whitaker, 2009*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Eurydactylodes - occidentalis

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**

# Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B2ab(i,ii,iii,iv) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Eurydactylodes occidentalis* is listed as Critically Endangered because of its highly restricted distribution, severely fragmented habitat, and continuing decline in the extent of occurrence, area of occupancy, and extent and quality of habitat. The species is restricted to two locations, both very small. The first is a remnant of 8 ha, fenced. The second location (Gouaro-Déva) is under threat from development. The locations are about 50 km apart with farmland in between. Surveys in surrounding area have failed to locate this species. Despite one site being fenced, both face high threat from invasive species.

# Distribution

## Geographic Range

*Eurydactylodes occidentalis* is endemic to Province Sud, New Caledonia. It is distributed in the central west coast of Grande Terre between Poya and Bourail. This species is known from only two locations—an 8 ha forest remnant near Poya and a much larger remnant (approximately 240 ha) at Gouaro-Déva northwest of Bourail. It occurs at elevations of up to 20 m. The extent of occurrence is approximately 260 km², and the area of occupancy is estimated at 2.5 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the

islands were taken.  Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 20

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

Although there are no quantitative data on population size or trends, ongoing habitat loss and degradation suggests that populations are declining. The lowlands of the central west coast of Grande Terre have been almost totally denuded by conversion to pastoral farmland and only tiny isolated remnants of sclerophyll forest remain. As a consequence the remaining populations of *Eurydactylodes occidentalis* are highly fragmented and isolated.

# Habitats and Ecology

*Eurydactylodes occidentalis* occurs in sclerophyll forest and closed mesophyll forest. It is arboreal and least partly, possibly, primarily diurnal. This species appears to remain on twigs and foliage all the time rather than seeking cover during periods of inactivity.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Dry | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The major threat to this species is degradation —and ultimately the loss— of the remaining areas of habitat caused by livestock and wild ungulates (deer and pigs). Rodents and feral cats occur in all sclerophyll remnants on the west coast and are expected to exert a predation pressure. Likewise, the invasive ant *Wasmannia auropunctata* is abundant in these forests and may have a detrimental impact on this species (Jourdan *et al*. 2000, 2001). Plans for tourist development at Gouara-Déva further threaten the habitat at that site. The distinctive chameleon-like appearance of this species and its diurnal activity make it a potential target for illegal collection and trafficking.

## Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is not present in any reserves and no species-specific conservation management is currently being undertaken. Conservation measures are urgently needed for this species. Research is also needed regarding the population size and trends.

## Bibliography


Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2009. Review and phylogeny of the New Caledonian diplodactylid gekkotan genus *Eurydactylodes* Wermuth, 1965, with the description of a new species. *Zoologia Neocaledonica 7, Mémoires du Muséum National d'Histoire Naturelle* 198: 13–36.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Eurydactylodes vieillardi - (Bavay, 1869)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Eurydactylodes - vieillardi

**Common Names:** Gecko-caméléon de Vieillard (French), Vieillard's Chamaeleon Gecko (English)
**Synonyms:** Platydactylus vieillardi Bavay, 1869 ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| NT - Near Threatened, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Eurydactylodes vieillardi* is listed as Near Threatened although its extent of occurrence is below the threshold for Vulnerable, the species is present at many more than ten locations, the population is significantly greater than 10,000 individuals and the reduction in its population size is expected to be much less than 30%. However, given the extent of ongoing clearance of low elevation habitats, the escalating threat to mid-to high elevation habitat from nickel mining, and the high level of impact by fire on reducing the size of forest patches on the central metamorphic ranges, the status of this species needs to be monitored as it could change rapidly and require re-assignment.

# Distribution

## Geographic Range

*Eurydactylodes vieillardi* is endemic to New Caledonia. It is widespread on Grande Terre south of the Koniambo and Tchingou massifs. Also recorded from Ile des Pins. It occurs at elevations of up to 950 m. The extent of occurrence is approximately 11,500 km², and the area of occupancy is estimated at 2,000 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 950

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size or trends for this species, but it remains common at some locations with good maquis habitat, generally those at higher elevation. It is presumed to have suffered a substantial reduction in population size and extent from past habitat loss and degradation through clearance for agriculture, mining and afforestation, and from wildfires. This trend is ongoing with the expansion of most nickel mines within the species' range, and the continued impacts of clearance and wildfires.

# Habitats and Ecology

This species inhabits a very wide range of wooded habitats including maquis shrublands, sclerophyll forest, gallery forest, closed humid forest, and montane forest. It is arboreal; at least partly, possibly primarily diurnal. It appears to remain on twigs and foliage all the time rather than seeking cover during periods of inactivity.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Dry | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

Threats to this species include the expansion of the nickel mining industry on most of the larger ultramafic massifs within its range; further loss of habitat to clearance for agriculture, afforestation projects and wildfires; habitat degradation caused by introduced ungulates (deer and pigs); and predation by introduced mammals (rodents and feral cats). The introduced ant, *Wasmannia auropunctata*, occurs in most of the lower-elevation forests and is expected to have a detrimental impact on *Eurydactylodes vieillardi* populations (Jourdan *et al.* 2000, 2001). The distinctive chameleon-like appearance of this species and its diurnal activity make it a potential target for illegal collection and trafficking.

## Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is present in Parc Provincial de la Rivière Bleue and a number of other reserves in the south, including Pic Ningua, Pic du Grand Kaori and Forêt Nord. No active species-specific conservation management is currently being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2009. Review and phylogeny of the New Caledonian diplodactylid gekkotan genus *Eurydactylodes* Wermuth, 1965, with the description of a new species. *Zoologia Neocaledonica 7, Mémoires du Muséum National d'Histoire Naturelle* 198: 13–36.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Rhacodactylus chahoua - (Bavay, 1869)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Rhacodactylus - chahoua

**Common Names:** Gecko Géant à Nez Court (French), Neukaledonischer Riesengecko (), Mossy Prehensile-tailed Gecko (English), Bavay's Giant Gecko (English), Short-snouted Giant Gecko (English)
**Synonyms:** Platydactylus chahoua Bavay, 1869 ;

**Taxonomic Note:**

Recent genetic data shows populations in northern Grande Terre and on the Iles Belep are highly distinct.

## Red List Assessment

| Red List Status |
| --- |
| VU - Vulnerable, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Vulnerable because it has a restricted and fragmented distribution and there is continuing decline in its extent of occurrence, area of occupancy and extent and quality of its habitat.

# Distribution

## Geographic Range

This species is endemic to New Caledonia. It occurs in Grande Terre, Iles Belep (Ile Art only) and Ile des Pins. Very few widely scattered localities are known and at many of these the continued occurrence of this species is uncertain. It occurs at elevations of up to 500 m. The extent of occurrence is approximately 16,600 km², and the area of occupancy is estimated to be < 1,000 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 500

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

## Population

There are no quantitative data on population size or trends. It is presumed to have suffered a substantial past reduction in population size and extent through habitat loss, mainly associated with logging and the clearance of lowland forests for agriculture. This species remains relatively common at a few sites but at others there are clear indications that the populations are declining, e.g. on Dôme de Tiébaghi closed forest habitat occupied by *Rhacodactylus chahoua* is being lost to expansion of the nickel mine and degraded by mining activities.

## Habitats and Ecology

This species inhabits gallery and closed forests. It is nocturnal and arboreal. It shelters by day in tree crevices and holes and forages at night in the canopy.

### IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

### Systems

**System:** Terrestrial

## Threats

The primary threat to this species is the continued loss or degradation of forest habitat. This is a particular risk near settlements and along river valleys where agricultural activities are intensifying, and on Ile des Pins where there is the additional effect of increased tourism. Mining is a much lesser risk to *Rhacodactylus chahoua* than other lizard species as only a very small proportion of its known occurrence (two locations—Ile Art and Dôme de Tiébaghi) is on the ultramafic surface where nickel occurs. Other threats to this species include habitat loss or degradation from wildfires (particularly Iles Belep) and the effects of introduced ungulates (deer and pigs). Predation by introduced mammals is a constant threat, especially rats as they are abundant in lowland forest habitats and capable of foraging in the canopy. It is expected that the introduced ant, *Wasmannia auropunctata*, will be a substantial threat as it is known to have a detrimental impact on lizard populations (Jourdan *et al*. 2000, 2001). Illegal collection and trafficking of *Rhacodactylus chahoua* is a risk at accessible locations.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). One location at which *Rhacodactylus chahoua* occurs (Rivière Nehoué) is administered as a recreation reserve but it receives high human use and it is not known to occur in any other protected areas. No species-specific conservation management is currently being undertaken.

## Bibliography


Bauer, A.M. 1985. Notes on the taxonomy, morphology and behaviour of *Rhacodactylus chahoua* (Bavay) (Reptilia: Gekkonidae). *Bonner Zoologische Beiträge* 36: 81-94.

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Seipp, R., and Henkel, F.W. 2000. *Rhacodactylus: biology, natural history and husbandry*. Edition Chimaira, Frankfurt.


DRAFT

# *Rhacodactylus ciliatus - (Guichenot, 1866)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Rhacodactylus - ciliatus

**Common Names:** Crested Gecko (), Eyelash Gecko ()
**Synonyms:** Correlophus ciliatus Guichenot, 1866 ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| VU - Vulnerable, B1ab(i,ii,iii,v) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Rhacodactylus ciliatus* is listed as Vulnerable because it has a restricted distribution and there is continuing decline in the extent and quality of its habitat. At least 50% of the range of this species is likely under threat. There is habitat fragmentation over part of the range but there are also relatively large continuous tracts of habitat.

# Distribution

## Geographic Range

This species is endemic to Province Sud, New Caledonia. It occurs in Grande Terre, and Ile des Pins. On Grande Terre there are only four known localities widely scattered across the southern half of the island (Canala to Rivière Bleue). It is possible that this species occurs in intervening forested areas. It occurs at elevations between 150 m and 1,000 m. The extent of occurrence is approximately 1,600 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 150

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size or trends. It is presumed to have suffered a substantial reduction in population size and extent in the past through habitat loss associated with logging, wildfires and the clearance of low and mid-elevation forests for agriculture.

## Habitats and Ecology

This species inhabits coastal forests, closed humid forests and montane forests. It is nocturnal and arboreal. It shelters by day in tree crevices and holes or amongst dense foliage, and forages at night in the canopy.

### IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

### Systems

**System:** Terrestrial

## Threats

The main threats to this species are the further loss or degradation of habitat from wildfires and clearance for agriculture, predation by rodents, and—at lower elevation sites—the impact of the introduced ant, *Wasmannia auropunctata* (Jourdan *et al.* 2000, 2001). Habitat loss and fragmentation are the main threats on Ile des Pins. At all Grande Terre locations habitat degradation from introduced ungulates (deer and pigs) is also a problem. Illegal collection and trafficking of *Rhacodactylus ciliatus* is a risk at accessible locations.

## Conservation

Protected in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is present in Parc Provincial de la Rivière Bleue but it is not known to occur in any other protected areas. No active conservation management is currently being undertaken for this species.

## Bibliography

DRAFT

**Common Names:** New Caledonia Giant Gecko ()
**Synonyms:** Gecko leachii Schinz, 1834 ; Ascalabotes leachianus Cuvier, 1829 ;

**Taxonomic Note:**
Three subspecies of *Rhacodactylus leachianus* have been described—*R. l. leachianus* (Cuvier 1829) (Grande Terre); *R. l. aubrianus* Bocage 1873; *R. l. henkeli* Seipp & Obst 1994 (Ile des Pins and satellite islands)—but these are unsupported by genetic data and no longer recognised as valid (Good et al. 1997).

# Red List Assessment

| Red List Status |
|---|
| LC - Least Concern, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Least Concern given that is distributed throughout Grande Terre, it is found at many locations, and is present in a number of protected areas.

# Distribution

## Geographic Range

This species is endemic of New Caledonia. It occurs in Grande Terre, and Ile des Pins and its satellite islands. It is known from widely scattered localities in the east and south of Grande Terre (northernmost site is Mt Mandjélia in the Panié massif); present on many islands and islets around Ile des Pins. It occurs at elevations between 500 m and 1,100 m. The extent of occurrence is approximately 10,000 km², and the area of occupancy is estimated to be approximately 1,000 km². However, area of occupancy is likely to be greater than the number of records indicate as many sites are in relatively extensive areas of potential habitat.

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 500

**Elevation Upper Limit (in metres above sea level):** 1,100

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size or trends for this species. It is presumed to have suffered a substantial reduction in population size and extent in the past through habitat loss associated with logging and the clearance of low and mid-elevation forests for agriculture. Relatively high density populations remain at some sites, particularly those on the islands and islets near Ile des Pins, but these represent an extremely small proportion of the species' overall distribution.

# Habitats and Ecology

This species inhabits coastal forests, closed humid forests and montane forests. It is nocturnal and arboreal. It shelters by day in tree crevices and holes, and forages at night in the canopy.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The primary threats to this species are the further loss or degradation of habitat, predation by introduced mammals (rodents and cats), and—at lower elevation sites—the impact of the introduced ant, *Wasmannia auropunctata* (Jourdan *et al*. 2000, 2001). At all locations on Grande Terre, habitat degradation from introduced ungulates (deer and pigs) is a problem. Illegal collection and trafficking of *Rhacodactylus leachianus* is a particular threat at accessible locations, especially those on the small islands where the low stature of the vegetation makes them easier to capture. Because of its very large body size an unusual and localised risk factor for this species is electrocution from high-tension power lines passing through forested habitats. Potentially severe localised threat from fire ants and development/agriculture at low elevations. Complex biology could impact survival. The island populations are particularly susceptible to stochastic events that could lead to localised extinctions.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in Réserve de Nature Sauvage du Mt Panié, Réserve de Nature Sauvage du Massif de l'Aoupinié, Parc Provincial de la Rivière Bleue and several other reserves including Nodela and Forêt Nord. No active conservation management is currently being undertaken for this species.

## Bibliography

DRAFT

# *Rhacodactylus sarasinorum - Roux, 1913*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Rhacodactylus - sarasinorum

**Common Names:** Sarasin's Giant Gecko (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**
Genetic substructuring has been detected between the population at Mt Koghis and those in the Prony district but this does not warrant specific distinction.

## Red List Assessment

| Red List Status |
| --- |
| VU - Vulnerable, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

Although *Rhacodactylus sarasinorum* occurs in several protected areas, its overall distribution is restricted and fragmented, and there is continuing decline in the extent and quality of its habitat, mainly from wildfires, mining activities and introduced ungulates. Hence it is listed as Vulnerable.

# Distribution

## Geographic Range

This species is endemic to Province Sud, New Caledonia. It is known only from a number of isolated populations across the far south of Grande Terre (south of Mt Koghis). Known populations are widely scattered and often in small, isolated closed forest remnants. It occurs at elevations between 20 m to 600 m. The extent of occurrence is approximately 900 km², and the area of occupancy is estimated to be < 100 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 20

**Elevation Upper Limit (in metres above sea level):** 600

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

## Population

This species is presumed to have suffered a substantial reduction in population size and area of occupancy in the past due to the logging and wildfires that have decimated closed forests and left them severely fragmented. Although logging has now stopped, the expanding nickel industry in the south of Grande Terre is resulting in further habitat loss and fragmentation. *Rhacodactylus sarasinorum* is still relatively common at some locations but there are no quantitative data on population size or trends.

## Habitats and Ecology

This species primarily occurs in closed humid forests but has been documented in adjoining tall maquis shrublands (maquis paraforestier) and coastal forests. It is nocturnal and arboreal. It shelters by day in tree crevices and holes and forages at night on trunks and branches. Found in almost all forest patches with suitably sized trees. Probably highly dependent on hollows in trees.

### IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

### Systems

**System:** Terrestrial

## Threats

The primary threat to this species is the further loss or degradation of habitat, particularly from mining in the southern part of its range, but also including peripheral damage to forest remnants from wildfires in maquis shrublands and damage from introduced ungulates (deer and pigs). Other threats include predation by introduced mammals (rodents and cats) and the introduced ant, *Wasmannia auropunctata*, which is expected to have a detrimental impact (Jourdan *et al.* 2000, 2001). *Rhacodactylus sarasinorum* is also vulnerable to illegal collection and trafficking at accessible locations.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in Parc Provincial de la Rivière Bleue and a number of other reserves in the south including Mt Koghis, Forêt Cachée, Pic du Pin, Pic du Grand Kaori and Forêt Nord. No active conservation management is currently being undertaken for this species.

# Bibliography

DRAFT

## *Rhacodactylus trachyrhynchus - Bocage, 1873*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - DIPLODACTYLIDAE - Rhacodactylus - trachyrhynchus

**Common Names:** Rough-snouted Giant Gecko (), Gecko géant à nez rugueux (French), Tough-snouted Giant Gecko ()
**Synonyms:** Platydactylus duvaucelli Bavay, 1869 ; Chameleonurus trachycephalus Boulenger, 1878 ;

**Taxonomic Note:**
Recent genetic data shows that the subspecies *R. trachyrhynchus trachycephalus* (Seipp and Henkel 2000) should be regarded as a full species.

# Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B2ab(i,ii,iii,iv,v) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| True | - | Passed | - | - |

**Assessor(s):** Whitaker, A.H., Sadlier, R.A. & Bauer, A.M.

**Reviewer(s):** Tognelli, M., Cox, N.A., Ram, M., Collen, B. & Bohm, M

## Assessment Rationale

*R. trachyrhynchus* has been assessed as Endangered because its area of occupancy is less than 500 km², its distribution is severely fragmented, and there is a continuing decline in the extent of occurrence, area of occupancy, extent and quality of its habitat, and probably in the number of mature individuals due to the effects of invasive species and harvesting for the pet trade. All known populations are disjunct and several are small and highly impacted. Threats in the south are primarily from habitat clearance for agriculture and development, fire ants and wildfires; in the north, threats are past clearing at Pindaï and fire ants. Impacts from invasive mammals affect all populations. The population at Pindaï and those in the extreme south-east of Grande Terre are particularly at risk of extinction.

# Distribution

## Geographic Range

*R. trachyrhynchus* is endemic to New Caledonia. It is restricted to the southern half of Grande Terre. It is known from five or six widely scattered and isolated populations between Presqu'ile de Pindaï and Mt Aoupinié in the north and the Goro district in the south. This species also inhabits the Isle of Pines and the surrounding islets. Occurs from 5 up to 500 m asl.

The extent of occurrence is estimated at approximately 9,000 km² and the area of occupancy at .

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 5

**Elevation Upper Limit (in metres above sea level):** 500

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

This species is described as "not locally abundant" on Grande Terre by Bauer and Sadlier (2000). There are no quantitative data on population size or trends. It is assumed to have suffered a substantial reduction in population size and extent in the past through habitat loss associated with clearance of the west coast sclerophyll forests for agriculture, and clearance of low and mid-elevation humid forests for logging and agriculture.

# Habitats and Ecology

This species is a forest specialist. At most locations, this species inhabits humid forests but it is also known from a sclerophyll forest site. It shelters by day in crevices and holes in trees and forages at night in the canopy. On a general note, *Rhacodactylus* are not found in disturbed environments (Bauer and Sadlier 2001).

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Dry | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Life History

| Maximum Size (in cms) |
|---|
| SVL: 17 |

## Breeding Strategy

| Does the species lay eggs? |
|---|
| False / No |

| Does the species give birth to live young |
|---|
| True / Yes |

| Does the species exhibit parthenogenesis |
|---|
| False / No |

| Does the species have a free-living larval stage? |
|---|
| False / No |

| Does the species require water for breeding? |
|---|
| False / No |

## Systems

**System:** Terrestrial

# Use and Trade

## General Use and Trade Information

This species is collected for pet trade.

# Threats

The main risk to *R. trachyrhynchus* is further loss of habitat through clearance, logging or wildfires. Additional threats are habitat degradation caused by introduced ungulates (deer and pigs), predation by introduced mammals

(rodents and cats), and the detrimental effects of the introduced ant, *Wasmannia auropunctata* (Jourdan *et al*. 2000, 2001). Illegal collection and trafficking of *R. trachyrhynchus* may be a problem at accessible locations. The ovoviviparous reproduction in this species (resulting in a lower annual reproductive output than other *Rhacodactylus* species) exacerbates the vulnerability of this taxon.

## Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). Not listed on CITES. Present in Réserve de Nature Sauvage du Massif de l'Aoupinié but not recorded at any other protected location. No active conservation management is currently being undertaken.

## Bibliography


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Bauer, A.M. and Sadlier, R.A. 1993. Systematics, biogeography and conservation of the lizards of New Caledonia. *Biodiversity Letters* 1: 107-122.

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Bauer, A.M. and Sadlier, R.A. 2001. New data on the distribution, status, and biology of the New Caledonian giant geckos (Squamata: Diplodactylidae: *Rhacodactylus* spp.). *Amphibian and Reptile Conservation* 2(1): 24-29.

CI Maruia [Conservation International & Marui Society]. 1998. La conservation de la biodiversite dans la province Nord, Nouvelle Caledonie. Volume 1: Rapport principale (117 pp), Volume 2: Appendices (85 pp.). Unpublished reports, Conservation International. Conservation International and Maruia Society, Washington, D.C., USA and Nelson, New Zealand.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Seipp, R., and Henkel, F.W. 2000. *Rhacodactylus: biology, natural history and husbandry*. Edition Chimaira, Frankfurt.


DRAFT

***Dierogekko inexpectatus - Bauer, Jackman, Sadlier & Whitaker, 2006***

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**

# Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, A3c;B1ab(iii,v)+2ab(iii,v) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

The species is listed as Critically Endangered because it is found in only two sites with a highly restricted distribution. The existing habitat is highly fragmented, and there is continuing decline in its quality. These are likely relict fragments of habitat. The entire plateau where this species occurs is expected to be mined in the coming decade. Extensive surveys in the first of two locations failed to locate the species after invasion by fire ants; both locations now have fire ants.

# Distribution

## Geographic Range

This species is endemic to Province Nord of New Caledonia. It is restricted to a very small area on the northern end of the Poum massif, northern Grande Terre. Searches elsewhere on the Poum massif and on adjacent mountains have failed to locate other populations. It occurs at elevations between 260 m and 320 m. The extent of occurrence is approximately 0.05 km$^2$, and the area of occupancy is estimated to be < 0.02 km$^2$, consisting of two sub-populations approximately 200 m apart.

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the

islands were taken.  Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 260

**Elevation Upper Limit (in metres above sea level):** 320

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

This species is presumed to have suffered a significant reduction in population size and extent from habitat loss and degradation resulting from wild fires and past mining activities. The two known populations are in the largest of the few remaining closed-forest remnants, each being < 1 ha in extent. One of the populations has collapsed following the colonisation of the forest patch by fire ants (*Wasmannia auropunctata*) around 2002 and the species has not been seen there since its discovery in 2001. The present population size is estimated at fewer than 200 individuals and is expected to be declining.

# Habitats and Ecology

*Dierogekko inexpectatus* inhabits low, closed-forest remnants on rocky cuirasse surface, sheltering beneath stones by day and climbing the trees and shrubs at night. According to GIS data, maquis forests on ultramafic soils in the Poum region occur only above 100 m.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The greatest single threat to *Dierogekko inexpectatus* is the immediate plan to mine the entire plateau of the Poum massif for nickel during the coming decade, something that would result in the removal of the entire habitat of this species. The closed-forest remnants are also very vulnerable to the wildfires that frequently burn through the adjacent maquis shrublands, reducing the extent of the forest through damaging the periphery, and habitat degradation is also occurring from introduced ungulates (deer and pigs). The relatively recent colonisation of the forest remnants by the introduced ant *Wasmannia auropunctata* is also expected to have a severe and potentially unsustainable impact on the geckos as these ants are known to decimate lizard populations and lead to localised extinctions (Jourdan *et al.* 2000, 2001). Rodents and feral cats are numerous on the massif and are expected to exert a predation pressure.

## Conservation

This species is in urgent need of conservation measures as it occurs in a very restricted and fragmented area and is affected by ongoing threats. Currently, it does not occur in any protected area.

## Bibliography

Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2006. A revision of the *Bavayia validiclavis* group (Squamata: Gekkota: Diplodactylidae), a clade of New Caledonian geckos exhibiting microendemism. *Proceedings of the California Academy of Sciences* 57: 503–547.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

# *Dierogekko insularis - Bauer, Jackman, Sadlier & Whitaker, 2006*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - GEKKONIDAE - Dierogekko - insularis

**Common Names:** Islands striped gecko (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

# Red List Assessment

| Red List Status |
| --- |
| NT - Near Threatened, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

The species faces threat from invasive species, wildfires, and potentially from mining. Despite its small area of occupancy and restriction to three locations the current levels of threat are not considered sufficient to place the species under a high risk of extinction. Therefore, it is listed as Near Threatened.

# Distribution

## Geographic Range

This species is endemic to the Province Nord of New Caledonia. It is present in Iles Belep and Ile Yandé, north-west of Grande Terre. There are three known sub-populations (Ile Art, Ile Pott, and Ile Yandé). It occurs at elevations up to 280 m. The extent of occurrence is approximately 35 km$^2$, and the area of occupancy is estimated at 5 km$^2$.

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 280

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

*Dierogekko insularis* is still locally abundant at some sites where good habitat remains, but there is no information on present population trends. This species is presumed to have suffered a significant reduction in population size and extent due to habitat loss and degradation resulting from wildfires, clearance for agriculture and grazing, and past mining activities.

# Habitats and Ecology

*Dierogekko insularis* inhabits low, closed-forest remnants on rocky cuirasse surfaces (Ile Art and Ile Yandé), and rocky maquis shrublands (Ile Pott, Ile Art and Ile Yandé). It is nocturnal and arboreal, sheltering beneath stones by day, and climbing into the vegetation at night

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The populations on the Iles Belep are under constant threat from wildfires that encroach on the remaining areas of habitat. There is also localised pressure on habitat from clearance for subsistence gardening and timber harvest. Habitat degradation is also occurring on Ile Yandé from introduced ungulates (goats and pigs) but fortuitously there are no wild ungulates on the Iles Belep. Predation by rodents and feral cats is an issue at all locations where *Dierogekko insularis* occurs. The occurrence of *Wasmannia auropunctata* in forest habitats on these islands is also expected to have a severe and potentially unsustainable impact on the geckos, as these ants are known to decimate lizard populations and lead to localised extinctions (Jourdan *et al.* 2000, 2001). All three islands where the species occurs have been subjected to nickel exploration and localised mining in the past, and the increasing pressure on remaining ore reserves means the habitat of this species is at high risk, particularly on the cuirasse plateaux on Ile Art.

# Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species does not occur in any protected area, therefore conservation measures should be implemented. Although it is common at some sites, it is highly restricted and there are several ongoing threatening processes. Research and monitoring of the population status, habitat and threats for this species should be carried out.

## Bibliography


Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2006. A revision of the *Bavayia validiclavis* group (Squamata: Gekkota: Diplodactylidae), a clade of New Caledonian geckos exhibiting microendemism. *Proceedings of the California Academy of Sciences* 57: 503–547.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Dierogekko kaalaensis - Bauer, Jackman, Sadlier & Whitaker, 2006*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - GEKKONIDAE - Dierogekko - kaalaensis

**Common Names:** Kaala striped gecko (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii,v)+2ab(i,ii,iii,v) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Dierogekko kaalaensis* is listed as Critically Endangered because of its highly restricted distribution and a continuing decline in the extent of occurrence, area of occupancy, and habitat quality. All individuals occur in a single location under a high level of ongoing threat from mining. Other threats to this species come from invasive species and wildfires.

# Distribution

## Geographic Range

This species is endemic to the Province Nord of New Caledonia. It is known only from the Kaala massif, north-western Grande Terre. It is presently known from just three locations on the massif but expected to be more widely distributed. It occurs at elevations between 80 m and 1,000 m. The extent of occurrence is approximately 28 km$^2$, and the area of occupancy is estimated to be 9 km$^2$.

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 80

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

## Population

*Dierogekko kaalaensis* is presumed to have suffered a significant reduction in population size and extent with habitat loss and degradation resulting from wildfires and past mining activities. There is no information on present population density or trends.

## Habitats and Ecology

This species inhabits closed humid forest at low and mid-elevations, closed montane forest and *Araucaria* forests at high elevations, and rocky maquis shrublands at all elevations. It is nocturnal and arboreal, sheltering beneath stones by day and climbing into the vegetation at night.

### IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

### Systems

**System:** Terrestrial

## Threats

Two active nickel mines are present on the upper part of the massif where this species occurs, and there are plans to extend these, as well as re-open old mines on the western slopes. These actions will result in the loss of significant areas of habitat. Wildfires are a recurrent threat on the Kaala massif, particularly on the western slopes. There is also ongoing habitat degradation from introduced ungulates (deer and pigs). Rodents and feral cats are abundant on the Kaala massif and are expected to exert a predation pressure on this species. The present status of *Wasmannia auropunctata* on Kaala is unknown, but it is expected that these ants are present in or soon will occupy the low and mid-elevation forests with a consequent detrimental impact on the geckos (Jourdan *et al*. 2000, 2001).

## Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species does not occur in any protected area, therefore conservation measures should be implemented. Research and monitoring of the population status, habitat and threats for this species should be carried out.

## Bibliography

Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2006. A revision of the *Bavayia validiclavis* group (Squamata: Gekkota: Diplodactylidae), a clade of New Caledonian geckos exhibiting microendemism. *Proceedings of the California Academy of Sciences* 57: 503–547.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

# *Dierogekko koniambo - Bauer, Jackman, Sadlier & Whitaker, 2006*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - GEKKONIDAE - Dierogekko - koniambo

**Common Names:** Koniambo striped gecko (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Dierogekko koniambo* is listed as Critically Endangered because it has a very restricted distribution and there is continuing decline in its extent of occurrence, area of occupancy and the extent and quality of its habitat. This species is under high level of threat at the top of its range due to active mining operations. It is also at high risk in the lower portion of its range due to frequent fires.

# Distribution

## Geographic Range

*Dierogekko koniambo* is endemic to Province Nord, New Caledonia. It is known only from the Koniambo massif and adjacent lowlands, north-western Grande Terre. It occurs at elevations between 600 m and 1,000 m. The extent of occurrence is approximately 60 km², and the area of occupancy is estimated at 20 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 600

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

This species is presumed to have suffered a significant reduction in population size and extent with habitat loss and degradation resulting from wildfires, clearance for agriculture (low elevation) and past mining activities (mainly high elevation). *Dierogekko koniambo* is still locally abundant at some sites, but there are no quantitative data on population size or trends. However, the current construction of nickel processing facilities at Vavouto is drastically reducing the extent of the population at that location and the development of the associated mine is destroying large areas of habitat on the Koniambo massif.

# Habitats and Ecology

This species inhabits rocky maquis shrublands and sclerophyll forest on serpentine soils at low elevation near Vavouto, and maquis shrublands and closed montane forest at mid- to high elevations on the Koniambo massif. It is nocturnal, arboreal, sheltering beneath stones by day and climbing into the vegetation at night.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The primary threat to *Dierogekko koniambo* is the development of a major nickel mine on the Koniambo massif and the associated processing facilities at Vavouto which will result in the loss of significant areas of habitat for this species. Wildfires are a constant threat, particularly in maquis shrublands, and there is widespread habitat degradation from introduced ungulates (deer and pigs). The introduced ant, *Wasmannia auropunctata,* is present in the maquis and sclerophyll forest habitat at Vavouto, and is expected to have a severe and potentially unsustainable impact on the geckos (Jourdan *et al.* 2000, 2001). Rodents and feral cats are numerous throughout the range of these geckos and are expected to exert a predation pressure.

# Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is not present in any protected areas, therefore conservation measures are needed.

# Bibliography

Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2006. A revision of the *Bavayia validiclavis* group (Squamata: Gekkota: Diplodactylidae), a clade of New Caledonian geckos exhibiting microendemism. *Proceedings of the California Academy of Sciences* 57: 503–547.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

# *Dierogekko nehoueensis - Bauer, Jackman, Sadlier & Whitaker, 2006*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - GEKKONIDAE - Dierogekko - nehoueensis

**Common Names:** Striped Gekko (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Critically Endangered because it has a very restricted distribution, its habitat is severely fragmented, and there is continuing decline in its extent of occurrence, area of occupancy and quality of habitat, mainly from pollution from mining activities.

# Distribution

## Geographic Range

*Dierogekko nehoueensis* is endemic to Province Nord, New Caledonia. It is known only from the Dôme de Tiébaghi massif and adjacent lowlands, northern Grande Terre. It occurs at elevations up to 580 m. The extent of occurrence is approximately 40 km², and the area of occupancy is estimated at 12 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 580

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size or trends for *Dierogekko nehoueensis*, but it is still locally common at some sites with good habitat. However, the current expansion of the nickel mine on Dôme de Tiébaghi is reducing the area of occupied habitat and populations are noticeably declining in areas affected by pollution (dust) from the mine. This species is presumed to have suffered a substantial reduction in population size and extent with habitat loss from forest clearance for agriculture at low elevations and past mining activities (mainly at higher elevation).

# Habitats and Ecology

At Rivière Nehoué, *Dierogekko nehoueensis* occupies gallery forest on the floodplain; on Dôme de Tiébaghi it is present in closed-forest and in maquis shrubland. This species is nocturnal and arboreal, sheltering beneath stones and logs by day and climbing into the vegetation at night.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The major threat to *Dierogekko nehoueensis* is the current expansion of the nickel mine on Dôme de Tiébaghi as this will reduce the extent of habitat. Wildfires are a recurrent threat on Dôme de Tiébaghi, particularly in maquis shrublands. There is widespread habitat degradation throughout the range of these geckos from introduced ungulates (deer and pigs, plus cattle at Rivière Nehoué). The invasive ant, *Wasmannia auropunctata*, is abundant at Rivière Nehoué and in some closed forest areas on the massif. This ant species is expected to have a severe and potentially unsustainable impact on the geckos (Jourdan *et al.* 2000, 2001). Rodents and feral cats are numerous throughout the area and are expected to exert a predation pressure.

# Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). A small part of the habitat of *Dierogekko nehoueensis* at Rivière Nehoué is administered as a recreation reserve but it receives high human use. Two areas on the upper part of Dôme de Tiébaghi are unofficially set aside as botanical reserves, but to date this species has not been recorded within them. No conservation management is currently being undertaken.

# Bibliography

Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2006. A revision of the *Bavayia validiclavis* group (Squamata: Gekkota: Diplodactylidae), a clade of New Caledonian geckos exhibiting microendemism. *Proceedings of the California Academy of Sciences* 57: 503–547.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

# *Dierogekko poumensis - Bauer, Jackman, Sadlier & Whitaker, 2006*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - GEKKONIDAE - Dierogekko - poumensis

**Common Names:** Poum striped gecko (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

*Dierogekko poumensis* is listed as Critically Endangered because it has a very restricted distribution, its habitat is severely fragmented, and there is continuing decline in its extent of occurrence, area of occupancy and extent and quality of habitat. A plan to mine the Poum plateau is well advanced and it will remove the entire top of the mountain. Although the population density on the plateau is high, lower down it is low.

## Distribution

### Geographic Range

*Dierogekko poumensis* is endemic to Province Nord, New Caledonia. It is known only from the Poum massif, northern Grande Terre. It occurs at elevations between 10 m and 415 m. The extent of occurrence is approximately 18 km², and the area of occupancy is estimated at 8 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 10

**Elevation Upper Limit (in metres above sea level):** 415

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no data on population size and trends for *Dierogekko poumensis*. It is presumed to have suffered a significant reduction in population size and extent with habitat loss and degradation resulting from wildfires and past mining activities. However, this species is still locally abundant at some sites where good habitat remains.

# Habitats and Ecology

*Dierogekko poumensis* inhabits rocky maquis shrublands and low, closed-forest remnants. It is nocturnal and arboreal, sheltering beneath stones by day, and climbing into the vegetation at night.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|

| | | |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The current plan to mine the entire plateau of the Poum massif for nickel during the coming decade would result in the loss of approximately 25% of the current habitat of *Dierogekko poumensis* and some of the highest density populations. The mine development may also affect other parts of the massif. Wildfires are a major threat on the Poum massif and habitat degradation is also occurring from introduced ungulates (deer and pigs). The invasive ant, *Wasmannia auropunctata*, is present in closed forest remnants and maquis shrublands on the plateau (but is absent or uncommon in maquis on the rocky slopes of the massif) and is expected to have a detrimental impact on the geckos as they are known to decimate lizard populations and lead to localised extinctions (Jourdan *et al.* 2000, 2001). Rodents and feral cats are numerous on the Poum massif and are expected to exert a predation pressure.

## Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is not present in any reserves and no conservation management is currently being undertaken.

## Bibliography

Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2006. A revision of the *Bavayia validiclavis* group (Squamata: Gekkota: Diplodactylidae), a clade of New Caledonian geckos exhibiting microendemism. *Proceedings of the California Academy of Sciences* 57: 503–547.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

# *Dierogekko thomaswhitei - Bauer, Jackman, Sadlier & Whitaker, 2006*

**Common Names:** Taom striped gecko (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

# Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Dierogekko thomaswhitei* is listed as Critically Endangered because it has a very restricted distribution, is present in only one location, and there is continuing decline in its extent of occurrence, area of occupancy and extent and quality of its habitat. There are ongoing threats from mining, invasive species, and wildfires.

# Distribution

## Geographic Range

*Dierogekko thomaswhitei* is endemic to Province Nord, New Caledonia. It is known only from the Ouazangou-Taom massif, north-western Grande Terre. Confirmed only from Mt Taom. It occurs at elevations between 300 m and 1,000 m. The extent of occurrence is approximately 4 km2.

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 300

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on present population density or trends although this species can be locally abundant in favourable habitat. It is presumed to have suffered a significant reduction in population size and extent with habitat loss and degradation resulting from wildfires and past mining activities.

# Habitats and Ecology

*Dierogekko thomaswhitei* inhabits rocky maquis shrublands at mid- to high elevation and low closed montane forest. It is nocturnal and arboreal, sheltering beneath stones by day, and climbing into the vegetation at night.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

There is an active nickel mine within the range of *Dierogekko thomaswhitei* and it is expected that its area of operation will be extended, threatening a significant part of the gecko habitat. Wildfires are a recurrent threat, particularly at lower elevations. There is also ongoing habitat degradation from introduced ungulates (deer and pigs), again more pronounced at lower elevations. Rodents and feral cats are abundant on the Ouazangou-Taom massif and are expected to exert a predation pressure. The present status of *Wasmannia auropunctata* on Taom is unknown but it is expected that this ant species is present in or soon will occupy the low elevation forests with a consequent detrimental impact on the geckos (Jourdan *et al.* 2000, 2001).

## Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is not present in any reserves and no conservation management is currently being undertaken.

## Bibliography


Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2006. A revision of the *Bavayia validiclavis* group (Squamata: Gekkota: Diplodactylidae), a clade of New Caledonian geckos exhibiting microendemism. *Proceedings of the California Academy of Sciences* 57: 503–547.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Dierogekko validiclavis - (Sadlier, 1989)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - GEKKONIDAE - Dierogekko - validiclavis

**Common Names:** Bold-striped Gecko (English), Bavayia à bande épaisse (French)
**Synonyms:** Bavayia validiclavis Sadlier, 1989 ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B1ab(ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Dierogekko validiclavis* is listed as Endangered because it has a restricted distribution, it is found in a single location (two sites), and there is continuing decline in its extent of occurrence, area of occupancy, and extent and quality of habitat.

# Distribution

## Geographic Range

*Dierogekko validiclavis* is endemic to Province Nord, New Caledonia. It is known only from a single population (the Panié massif, north-eastern Grande Terre). Confirmed from just two sites—Mt Mandjélia and Mt Panié, 35 km apart— but the species is expected to be widely distributed along the massif between these two locations as the habitat is continuous and relatively undisturbed. It occurs at elevations between 300 m and 500 m. The extent of occurrence is approximately 225 km$^2$, and the area of occupancy is estimated to be < 100 km$^2$.

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 300

**Elevation Upper Limit (in metres above sea level):** 500

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on present population density or trends for *Dierogekko validiclavis*. This species may have suffered some reduction in range and population size as a result of habitat loss on the lower slopes of the massif through wildlfires and clearance for agriculture.

# Habitats and Ecology

*Dierogekko validiclavis* inhabits closed humid forests. It is nocturnal and arboreal, sheltering by day beneath stones and logs and climbing into subcanopy trees and shrubs at night.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

Rodents and feral cats are common throughout the Panié massif and are expected to exert a predation pressure on *Dierogekko validiclavis*. Wildfires are a constant threat on the lower slopes and may affect some habitat by damaging forest margins. Habitat degradation is also occurring in forest interiors from introduced ungulates (deer and pigs). There may be limited habitat loss at low levels from clearance for agriculture, and on Mt Mandjélia timber harvest may be affecting mid-elevation forests. The introduced ant, *Wasmannia auropunctata*, is present in forests at lower elevations and is expected to have a severe and potentially unsustainable impact on the geckos (Jourdan *et al*. 2000, 2001).

# Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). *Dierogekko validiclavis* is present in the Réserve de Nature Sauvage du Mt Panié. No conservation management is currently being undertaken, but this species may potentially benefit from proposed predator control in the La Guen catchment on Mt Panié.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2006. A revision of the *Bavayia validiclavis* group (Squamata: Gekkota: Diplodactylidae), a clade of New Caledonian geckos exhibiting microendemism. *Proceedings of the California Academy of Sciences* 57: 503–547.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A. 1989. *Bavayia validiclavis* and *Bavayia septuiclavis*, two new species of gekkonid lizard from New Caledonia. *Records of the Australian Museum* 40: 365–370.


DRAFT

# *Oedodera marmorata - Bauer, Jackman, Sadlier & Whitaker, 2006*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - GEKKONIDAE - Oedodera - marmorata

**Common Names:** Marbled Gecko (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**
Populations of *Oedodera* on the Poum and Kaala massifs are genetically and morphometrically divergent from *O. marmorata* from Dôme de Tiébaghi. They are treated as potentially distinct taxa under description and not included in this assessment for *Oedodera marmorata*.

## Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |

| Date Last Seen: |
|---|

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Oedodera marmorata* is listed as Critically Endangered because it has a very small geographic range, is present at only one location, and there is continuing decline in the extent of occurrence, area of occupancy, and extent and quality of its habitat. This species has been severely threatened by mining in the past, but currently the threat from mining is lower. It is exposed to intensive and ongoing threats from wildfires (at least three major fires in the last 10 years) and invasive species. The habitat is also under threat from a rapidly increasing human population in the district associated with the expanding mining industry on local massifs. If current threats continue, a population reduction of at least 50% in three generations is possible.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known from only one location—Dôme de Tiébaghi massif. It occurs at elevations between 10 m and 100 m. The extent of occurrence is approximately 20 km², and the area of occupancy is estimated at 10 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 10

**Elevation Upper Limit (in metres above sea level):** 100

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size or trends for this species. There are no known localities where the species is common. It is presumed to have suffered a reduction in population size and extent from past habitat loss and degradation through clearance for agriculture and mining, and from wildfires.

# Habitats and Ecology

This species occurs in maquis shrublands and closed forest remnants. It is nocturnal and arboreal. During the day, it shelters beneath loose bark or in tree holes and crevices, and forages at night on twigs and foliage to canopy height.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The major threat to this species is the current expansion of the nickel mines on Dôme de Tiébaghi as these are reducing the extent of habitat on this massif. Wildfires are a recurrent threat in maquis shrublands and there is on-going habitat degradation from introduced ungulates (deer and pigs). Rodents and feral cats are present at all known locations for *Oedodera marmorata* and they are expected to exert a predation pressure. The highly invasive Asian gecko *Hemidactylus frenatus* is currently spreading into the maquis habitat occupied by *Oedodera marmorata* and may be competing with it (*Oedodera marmorata* is noticeably less abundant where *Hemidactylus frenatus* occurs than in adjacent areas without it). The invasive ant *Wasmannia auropunctata* is abundant in closed forest habitats occupied by *Oedodera marmorata* and is spreading into maquis habitats as well. The impact of these ants is not known but is expected to be detrimental (Jourdan *et al.* 2000, 2001). The unique phylogenetic position of this gecko and its distinctive appearance mean it is potentially a target for illegal collection and trafficking.

# Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is not presently in any reserves, but part of the Creek à Paul catchment is supposed to be so designated. No conservation species-specific management is currently being undertaken.

## Bibliography

Bauer, A.M., Jackman, T., Sadlier, R.A., Whitaker, A.H. 2006. A new genus and species of diplodactylid gecko (Reptilia: Squamata: Diplodactylidae) from northwestern New Caledonia. *Pacific science* 60: 125–135.

DRAFT

# *Caledoniscincus aquilonius - Sadlier, Bauer & Colgan, 1999*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - aquilonius

**Common Names:** Scinque de Litière du Nord (French), Northern Litter Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| NT - Near Threatened, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

Even though the extent of occurrence and area of occupancy are below the threshold values for Vulnerable, the population is significantly greater than 10,000 individuals, the reduction in population size expected to be < 30% and the species is present at >10 locations. However, because of the threats this species faces from habitat loss and degradation and invasive species, a Near Threatened status is appropriate.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is widespread in the ranges north from the Rivière Tiwaka. The northernmost locality is Rivière Nehoué. It occurs at elevations up to 1,000 m. The extent of occurrence is approximately 2,700 km², and the area of occupancy is estimated to be < 1,000 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species. It is presumed to have suffered a significant reduction in population size and extent in the past with habitat loss and degradation resulting from wildfires, clearance for agriculture and grazing, and from mining activities on the ultramafic massifs in the northwest. *Caledoniscincus aquilonius* is still locally abundant at sites where good habitat remains.

# Habitats and Ecology

This species occurs in closed forest and montane forest. It is diurnal, terrestrial, and is active in sunlight. It shelters in litter and basks and forages in sunlit patches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The greatest threat to this species is further habitat loss and degradation for which the primary causes are expected to be wildfires encroaching into forest habitat from adjacent shrublands and savanna, and the expansion of the nickel mining industry on the ultramafic massifs in the northwest. Habitat degradation by livestock at low elevations and by introduced ungulates (deer and pigs) throughout is also a risk. The introduced ant, *Wasmannia auropunctatus*, which is known to decimate lizard populations, is present in low and mid-elevation forests and will be a serious threat. Predation by introduced mammals (rodents and feral cats) is a further issue.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in the Réserve de Nature Sauvage du Mt Panié and the recreation reserve at Rivière Nehoué. No conservation management is currently being undertaken, but this species may potentially benefit from proposed predator control in the La Guèn catchment on Mt Panié.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A., Bauer, A.M. and Colgan, D.J. 1999. The scincid lizard genus *Caledoniscincus* (Reptilia: Scincidae) from New Caledonia in the Southwest Pacific: a review of *Caledoniscincus austrocaledonicus* (Bavay) and description of six new species from Province Nord. *Records of the Australian Museum* 51: 57-82.

# *Caledoniscincus atropunctatus - (Roux, 1913)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - atropunctatus

**Common Names:** Scinque de Litière Tacheté (French), Speckled Litter Skink (English)
**Synonyms:** Lygosoma austrocaledonicum atropunctatum Roux, 1913 ;

**Taxonomic Note:**
Recent research has shown genetic and morphometric divergence between populations in the north and south of Grande Terre suggesting that at least two or more cryptic taxa may be included within *Caledoniscincus atropunctatus* sensu Roux 1913

## Red List Assessment

| Red List Status |
|---|
| LC - Least Concern, (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

This species is listed as Least Concern because it is widespread and abundant, and it is present in many protected areas.

## Distribution

### Geographic Range

This species is indigenous to New Caledonia. It occurs throughout Grande Terre, and on Iles Belep, Ile des Pins, Iles Loyauté (Maré, Lifou, Ouvéa) and many smaller satellite islands. Also present extralimitally in southern Vanuatu. It occurs at elevations up to 1,000 m.

### Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |
| Vanuatu | Extant | Native | - | Resident |

# Population

Unquestionably very large areas of habitat for *Caledoniscincus atropunctatus* have been lost in the past from a variety of causes including forest clearance for agriculture, mining and wildfires. Nonetheless—although there are no detailed data on population size and trends—the species remains very widespread and is generally abundant. It is also able to occupy highly modified habitats, including well-vegetated urban gardens.

# Habitats and Ecology

This species occurs in a wide range of forested habitats including supralittoral vegetation, coastal forest, sclerophyll forest, lowland closed forest, and montane forest. It is diurnal, terrestrial and is active in sunlight. It shelters in litter, and basks and forages in sunlit patches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The primary threat to this species is from further loss and fragmentation of forest habitats which is potentially a problem throughout the species' range and could result from a variety of factors including clearance for agriculture and afforestation, mining and wildfires. Introduced ungulates (deer and pigs)—and at some low-elevation sites, livestock—are a threat through degradation of litter layers. In low and mid-elevation forests there is a potentially serious threat from the introduced ant, *Wasmannia auropunctatus*, which is known to decimate lizard populations. Predation by introduced mammals (rodents and cats) is also of concern throughout.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in most forested reserves throughout New Caledonia. No specific conservation management is currently being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Caledoniscincus auratus - Sadlier, Bauer & Colgan, 1999*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - auratus

**Common Names:** Scinque de Litière de Koumac (French), Koumac Litter Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Endangered because it is known from fewer than five isolated locations and has a restricted extent of occurrence and area of occupancy. Its habitat is under constant threat from wildfires and introduced ungulate, and invasive species (fire ants, rodents) are also a constant threat.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is restricted to lowland sites on the northwest of Grande Terre between Rivière Nehoué and Pouembout. It occurs at elevations up to 300 m. The extent of occurrence is approximately 1,600 km², and the area of occupancy is estimated to be < 100 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 300

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species. It is assumed to have suffered a significant reduction in population size and extent in the past from habitat loss and degradation resulting mostly from clearance of the west coast lowland forests for agriculture and grazing, and habitat loss from clearance and wildfires is continuing. *Caledoniscincus auratus* is still locally common at sites where good habitat remains.

# Habitats and Ecology

This species inhabits sclerophyll and lowland closed forest, sheltering in litter, and basking and foraging in sunlit patches. It is diurnal, terrestrial, and is active in sunlight.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The greatest threat to this species is further habitat loss and fragmentation that is expected to come from forest clearance for agriculture and from wildfires. Additional threats include habitat degradation from livestock and introduced ungulates (deer and pigs) which damage the litter layer, predation by introduced mammals (rodents and cats), and the potentially serious effect of high-density populations of the invasive ant *Wasmannia auropunctata*.

# Conservation

Protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). This species is not present in any reserves. No specific conservation management is currently being undertaken but the species may benefit from the removal of livestock and introduced ungulates from the sclerophyll forest at Forêt Tiéa.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A., Bauer, A.M. and Colgan, D.J. 1999. The scincid lizard genus *Caledoniscincus* (Reptilia: Scincidae) from New Caledonia in the Southwest Pacific: a review of *Caledoniscincus austrocaledonicus* (Bavay) and description of six new species from Province Nord. *Records of the Australian Museum* 51: 57-82.

DRAFT

# *Caledoniscincus austrocaledonicus - (Bavay, 1869)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - austrocaledonicus

**Common Names:** Common Litter Skink (English), Scinque de Litière Commun (French)
**Synonyms:** Leiolopisma austrocaledonicum (Bavay, 1869) ; Lygosoma austro-caledonica Bavay, 1869 ;

**Taxonomic Note:**
Genetic research shows that, as presently defined, *Caledoniscincus austrocaledonicus* sensu Bavay 1869 comprises several allopatric cryptic taxa, one of which is confined to the far north of Grande Terre (north of Koumac) and the islands to the north, including the Iles Belep.

## Red List Assessment

| Red List Status |
|---|
| LC - Least Concern, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Caledoniscincus austrocaledonicus* is listed as Least Concern as it remains very widespread, is able to occupy disturbed and modified habitats, and is generally abundant wherever it occurs.

# Distribution

## Geographic Range

This species is endemic to New Caledonia. It occurs throughout Grande Terre, and on Iles Belep, Ile des Pins, Iles Loyauté (Maré, Lifou, Ouvéa) and many smaller satellite islands. It occurs at elevations up to 1,000 m. The extent occurrence is approximately 16,500 km².

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species. However, the fact that it can occur in modified environments, sometimes in reasonable abundance, will have compensated to some extent for the widespread losses and degradation of natural habitats in the past.

# Habitats and Ecology

This species occurs in a very wide range of open and wooded habitats, including coastal sites, grassland, savannah, sclerophyll forest, and maquis shrublands. It is present in disturbed forests but generally absent from the interior of dense closed forest. It is diurnal, terrestrial, and is active in sunlight. It shelters in litter and dense vegetation, and forages in the open and in sunlit patches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Dry | Suitable | - |
| Savanna -> Savanna - Moist | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

This species is threatened by further loss and fragmentation of natural forest and shrubland habitats through clearance for agriculture and afforestation—and to a lesser extent by mining and wildfires—particularly when these result in a highly simplified vegetation (e.g. exotic pasture). In low and mid-elevation forested habitats there is a potentially significant threat from the introduced ant, *Wasmannia auropunctatus*, which is known to decimate lizard populations, and predation by introduced mammals (rodents and cats) is an ever-present issue.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in most reserves throughout New Caledonia. No specific conservation management is currently being undertaken

## Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A., Bauer, A.M. and Colgan, D.J. 1999. The scincid lizard genus *Caledoniscincus* (Reptilia: Scincidae) from New Caledonia in the Southwest Pacific: a review of *Caledoniscincus austrocaledonicus* (Bavay) and description of six new species from Province Nord. *Records of the Australian Museum* 51: 57-82.

DRAFT

# *Caledoniscincus bodoei - (Borner, 1980)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - bodoei

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| LC - Least Concern, (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

Even though the geographic range of this species is below the thresholds for a threatened category, it is widespread on the island, its population is significantly greater than 10,000 individuals, the reduction in population size is expected to be < 30%, and is present at many locations. In addition, this species is thriving in disturbed and modified habitats and is generally abundant wherever it occurs. It is therefore listed as Least Concern.

## Distribution

### Geographic Range

This species is endemic to Province Sud, New Caledonia. It occurs in Iles des Pins and its satellite islands. It occurs at elevations up to 260 m. The extent of occurrence is approximately 150 km² (based on island area) and the area of occupancy is < 150 km².

### Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 260

### Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no detailed information on population size and trends for this species but any potential decrease in the distribution and density of the population resulting from the past loss and fragmentation of natural habitats is likely to have been at least partly off-set by the fact that this species now occupies highly modified habitats, often in great abundance.

# Habitats and Ecology

This species inhabits a range of open and wooded habitats, including coastal sites, grassland, savannah, disturbed forest, and maquis shrublands. It is present in disturbed forests but absent from dense closed forest. It is diurnal, terrestrial, and is active in sunlight. It shelters in litter and dense vegetation, and forages in the open and in sunlit patches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Grassland -> Grassland - Subtropical/Tropical Seasonally Wet/Flooded | Suitable | - |
| Savanna -> Savanna - Moist | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

This species is most at risk to further loss and fragmentation of natural forest and shrubland habitats through clearance for agriculture and occupation, and from wildfires, especially when these result in a highly simplified vegetation (e.g. exotic pasture). In forested habitats there is also a significant threat from the introduced ant,

*Wasmannia auropunctatus*, which is known to decimate lizard populations. Predation by introduced mammals (rodents and cats) is a constant threat.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

## Bibliography


Bauer, A.M., and Sadlier, R.A. 1994. The terrestrial herpetofauna of the Ile des Pins, New Caledonia. *Pacific Science* 48(4): 353-366.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Caledoniscincus chazeaui - Sadlier, Bauer & Colgan, 1999*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - chazeaui

**Common Names:** Scinque de Litière de Chazeau (French), Chazeau's Litter Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Endangered because it has a restricted distribution, the known subpopulations are small and isolated, and there is continuing decline in the extent and quality of habitat. The subpopulations near Hienghène have undergone substantial declines recently and all threatening processes are ongoing at all locations. Although extensive surveys in the north-east have so far failed to detect the species elsewhere it is expected further populations exist, and if any are found, the species' Endangered status will require re-evaluation.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known only from five locations in north-eastern Grande Terre, three near the north-east coast (Amoa, Tiwaka and two sites south of Hienghène) and two on the central ranges (Forêt Plate and Tchingou). It occurs at elevations up to 900 m. The extent of occurrence is approximately 800 km$^2$, and the area of occupancy is estimated to be < 150 km$^2$.

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species. There has presumably been a significant reduction in population size and extent from past habitat loss and degradation as a consequence of wildfires and the clearance of low and mid-elevation closed forests for agriculture, and at higher levels on Tchingou for mining. The impacts of clearance and wildfires are ongoing. The subpopulations near Hienghène appear to have declined markedly in the past decade but that on Tchingou is locally common.

# Habitats and Ecology

This species inhabits closed forests—near Hienghène the sites are on forested lowland karst outcrops; at Tiwaka, Amoa and Forêt Plate they are closed humid forest on metamorphics; and at Tchingou it is montane forest on ultramafics. It is diurnal, terrestrial, and is active in sunlight. It shelters in litter and beneath stones and logs; basks and forages in sunlit patches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The lowland *Caledoniscincus chazeaui* near Hienghène are at high risk to further habitat loss and degradation from clearance for agriculture. These populations and that on Tchingou are also at risk to wildfires. All sites are vulnerable to habitat degradation from introduced ungulates (deer and pigs) and predation by introduced mammals (rodents and cats) is an ever-present threat. The low elevation populations are also at high risk to the invasive ant *Wasmannia auropunctata* which is known to decimate lizard populations and cause local extinctions.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A., Bauer, A.M. and Colgan, D.J. 1999. The scincid lizard genus *Caledoniscincus* (Reptilia: Scincidae) from New Caledonia in the Southwest Pacific: a review of *Caledoniscincus austrocaledonicus* (Bavay) and description of six new species from Province Nord. *Records of the Australian Museum* 51: 57-82.

DRAFT

# *Caledoniscincus cryptos - Sadlier, Bauer & Colgan, 1999*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - cryptos

**Common Names:** Scinque de Litière Cryptique (French), Cryptic Litter Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**
*Caledoniscincus cryptos* is highly differentiated on genetic characters but is weakly distinguished morphometrically from its congeners.

## Red List Assessment

| Red List Status |
|---|
| DD - Data Deficient, (IUCN version 3.1) |
| DD Reason: |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Data Deficient because it is known from only a single specimen and there is no information on its population size and trends and ecology.

# Distribution

## Geographic Range

This species is endemic to Province Sud, New Caledonia. It is known from a single specimen collected at an elevation of 500 m in Col d'Amieu, on the main dividing range north of La Foa. The extent of occurrence is not known, but continuous habitat like that at the capture site extends for many kilometres east and west along the dividing range.

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 500

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends for this species. It is expected that past forest clearance for agriculture and wildfires will have reduced the population size and extent. Habitat may also have been lost to logging.

# Habitats and Ecology

This species is found in mid-elevation closed humid forest. It is diurnal, terrestrial and is active in sunlight. It shelters in litter, and basks and forages in sunlit-patches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The primary threat to this species will be further loss and fragmentation of habitat resulting from clearance for agriculture and afforestation, and from wildfires. Additional threats include habitat degradation from livestock and introduced ungulates (deer and pigs) which damage the litter layer, predation by introduced mammals (rodents and cats), and the potentially serious effect of high-density populations of the invasive ant *Wasmannia auropunctata*.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves (but the only known site is immediately adjacent to the Réserve spéciale de faune du Col d'Amieu et Table Unio). No conservation management is currently being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A., Bauer, A.M. and Colgan, D.J. 1999. The scincid lizard genus *Caledoniscincus* (Reptilia: Scincidae) from New Caledonia in the Southwest Pacific: a review of *Caledoniscincus austrocaledonicus* (Bavay) and description of six new species from Province Nord. *Records of the Australian Museum* 51: 57-82.


DRAFT

# *Caledoniscincus festivus - (Roux, 1913)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - festivus

**Common Names:** Giant Litter Skink (English), Scinque de Litière Géant (French)
**Synonyms:** Lygosoma austro-caledonicum festivum Roux, 1913 ; Lygosoma austro-caledonicum intermedium Roux, 1913 ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| LC - Least Concern, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

Although *Caledoniscincus festivus* is never common, its extremely wide distribution and broad habitat use means it is not at risk. Therefore it is listed as Least Concern.

## Distribution

## Geographic Range

This species is endemic to New Caledonia. It occurs throughout Grande Terre. It occurs at elevations up to 1,000 m. The extent of occurrence is approximately 16,000 km², and the area of occupancy is estimated to be > 10,000 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no detailed information on population size and trends for this species but subjective data shows populations are sparse. Past loss of forest and shrubland habitats from clearance for agriculture and mining, and damage from wildfires, is expected to have reduced population size and extent and led to fragmentation.

# Habitats and Ecology

This species occurs in a wide range of natural shrublands and forested habitats. It is diurnal, terrestrial and is active in sunlight. It shelters in litter, and basks and forages in sunlit-patches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The main threat to this species is from further loss and fragmentation of forest and tall maquis habitats. This is potentially an issue throughout the species' range and could result from a variety of factors including clearance for agriculture and afforestation, mining and wildfires. Habitat degradation resulting from damage to the litter layer by introduced ungulates (deer and pigs) and livestock (some low-elevation sites) is a threat. In low and mid-elevation

forests there is a potentially serious threat from the introduced ant, *Wasmannia auropunctatus*, which is known to decimate lizard populations, and predation by introduced mammals (rodents and cats) is also of concern throughout.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is known to occur in many reserves across Grande Terre. No conservation management is being undertaken at present.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.


DRAFT

# *Caledoniscincus haplorhinus - (Günther, 1872)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - haplorhinus

**Common Names:** Scinque de Litière des Rivage (French), Strand Litter Skink (English)
**Synonyms:** Euprepes haplorhinus Günther, 1872 ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| LC - Least Concern, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Caledoniscincus haplorhinus* remains very widespread, is able to thrive in disturbed and modified habitats, and is generally abundant wherever it occurs. It is therefore listed as Least Concern.

# Distribution

## Geographic Range

This species is endemic to New Caledonia. It occurs throughout Grande Terre, and on Recif d'Entrecasteux (Ile Surprise), Iles Belep, Ile des Pins, Iles Loyauté (Maré, Lifou, Ouvéa) and many smaller satellite islands. It can occur at elevations of 1,000 m but it is more numerous at lower elevations (500 m). The extent of occurrence is estimated at 18,500 km².

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species but because it has adapted so well to modified environments—and is now often abundant in such habitats—any decrease in population size and extent resulting from losses and degradation of natural habitats in the past will, to some extent, have been off-set.

## Habitats and Ecology

This species occurs in a very wide range of open and wooded habitats from the strand line to montane maquis shrublands, including coastal sites, grassland, savannah, maquis shrublands, sclerophyll forest and disturbed parts of closed forest. Absent from dense closed forest. It prefers much more open habitats than *Caledoniscincus austrocaledonicus*. It is diurnal, terrestrial and is active in sunlight. It shelters in litter, dense vegetation and beneath other cover (stones, logs, debris); forages in the open and in sunlit-patches.

### IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Grassland -> Grassland - Subtropical/Tropical Seasonally Wet/Flooded | Suitable | - |
| Savanna -> Savanna - Moist | Suitable | - |

### Systems

**System:** Terrestrial

## Threats

Although this species will be at risk to further loss and fragmentation of natural forest and shrubland habitats through clearance and wildfires, and habitat degradation from livestock and introduced ungulates (deer and pigs), the greatest threat is expected to be from the introduced ant, *Wasmannia auropunctatus*, which is known to decimate lizard populations in low and mid-elevation forested habitats. Predation by introduced mammals (rodents and cats) is a relatively low risk.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in most reserves throughout New Caledonia. No specific conservation management is currently being undertaken.

## Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A., Bauer, A.M. and Colgan, D.J. 1999. The scincid lizard genus *Caledoniscincus* (Reptilia: Scincidae) from New Caledonia in the Southwest Pacific: a review of *Caledoniscincus austrocaledonicus* (Bavay) and description of six new species from Province Nord. *Records of the Australian Museum* 51: 57-82.

DRAFT

# *Caledoniscincus orestes - Sadlier, 1987*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - orestes

**Common Names:** Scinque de Litière du Mont Panié (French), Panié Litter Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**
There is a moderate level of genetic and morphometric differentiation between the widely disjunct groups of populations in the north and south of the species' range, and there is also a consistent difference in colouration between the population on the Panié massif and Koniambo. In the absence of data on the occurrence of the species between these groups of populations these differences are insufficient for taxonomic distinction.

## Red List Assessment

| Red List Status |
|---|
| EN - Endangered, B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Endangered because the known populations are isolated and show substructuring that indicates they need to be treated as separate management units. Furthermore, those on the ultramafic massifs (e.g. Koniambo) have been fragmented and localised by habitat loss and are under constant threat from nickel mining. All threatening processes are ongoing.

# Distribution

## Geographic Range

This species is endemic to New Caledonia. It is known from two widely disjunct groups of populations (> 100 km apart) on Grande Terre—in the north the species occurs on the Panié massif and massif Koniambo, and in the south on several mountain tops from Mé Adéo near Bourail to Mt Çidoa near Thio. It occurs at elevations up to 1,600 m. The extent of occurrence is approximately 4,500 km², and the area of occupancy is estimated to be < 300 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,600

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for for this species. It is presumed to have suffered a limited reduction in population size and extent in the past from habitat loss and degradation associated with mining on ultramafic massifs and wildfires in maquis shrublands. *Caledoniscincus orestes* is still locally abundant at some locations.

# Habitats and Ecology

This species inhabits mid-elevation closed forest (> 500 m), montane forest and high-elevation maquis. It is diurnal, terrestrial and is active in sunlight. It shelters beneath litter and stones, and basks and forages in sunlit-patches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The greatest threat to this species is from further habitat loss and degradation resulting from the expansion of the nickel mining industry on the ultramafic massifs in the south and northwest (the Panié massif is safe from mining). Wildfires damaging maquis shrublands and encroaching into forest margins are serious concern where habitat is restricted to isolated montane forest remnants. Habitat degradation by introduced ungulates (deer and pigs) damaging litter layers and predation by introduced mammals (rodents and feral cats) are also of concern. Possibly at risk to infestations on the introduced ant *Wasmannia auropunctata* at the lowest limits of its habitat.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in the Réserve de Nature Sauvage du Mt Panié. No conservation management is currently being undertaken but this species may potentially benefit from proposed predator control in the La Guèn catchment on Mt Panié.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Sadlier, R.A., O'Meally, D. and Bauer, A.M. 2002. The scincid lizard genus *Caledoniscincus* (Reptilia: Scincidae) from New Caledonia in the southwest Pacific: a review of *Caledoniscincus orestes* Sadlier. *Zoologia Neocaledonica 5, Mémoires du Muséum national d'Histoire naturelle* 187: 257–267.

# *Caledoniscincus renevieri - Sadlier, Bauer & Colgan, 1999*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - renevieri

**Common Names:** Renevier's Litter Skink (English), Scinque de Litière de Renevier (French)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv) (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

This species is listed as Endangered because it has restricted distribution, it is known from only three locations and the known subpopulations are small and isolated. Although extensive survey work along the central ranges has so far failed to detect the species elsewhere, it is possible further populations exist.

## Distribution

### Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known only from central Grande Terre at three locations along the main dividing range—Mt Aoupinié, Grottes de Adio and Col des Roussettes. It occurs at elevations between 200 m and 500 m. The extent of occurrence is approximately 800 km², and the area of occupancy is estimated to be < 100 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 200

**Elevation Upper Limit (in metres above sea level):** 500

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species. It has presumably undergone a reduction in population size and extent in the past from habitat loss and degradation resulting mostly from clearance for agriculture and logging, and from wildfires. These impacts are continuing. *Caledoniscincus renevieri* is still relatively abundant at sites where good habitat remains.

# Habitats and Ecology

This species occurs in closed lowland and mid-elevation forests. It is diurnal, terrestrial and is active in sunlight. It shelters in litter, and basks and forages in sunlit-patches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

This species is threatened by further habitat loss and fragmentation from forest clearance, logging and wildfires. Additional threats include habitat degradation from livestock and introduced ungulates (deer and pigs) which damage the litter layer, predation by introduced mammals (rodents and cats), and the potentially serious effect of high-density populations of the invasive ant *Wasmannia auropunctata*.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in the Réserve de Nature Sauvage du Massif de l'Aoupinié. No conservation management is currently being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A., Bauer, A.M. and Colgan, D.J. 1999. The scincid lizard genus *Caledoniscincus* (Reptilia: Scincidae) from New Caledonia in the Southwest Pacific: a review of *Caledoniscincus austrocaledonicus* (Bavay) and description of six new species from Province Nord. *Records of the Australian Museum* 51: 57-82.


DRAFT

# *Caledoniscincus terma - Sadlier, Bauer & Colgan, 1999*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Caledoniscincus - terma

**Common Names:** Scinque de litière de Mandjélia (French), Mandjélia litter skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| VU - Vulnerable, D2 (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Vulnerable because its distribution is restricted to a single location and there are ongoing threats from logging, invasive species and fire. It is relatively common where it occurs, but surveys beyond the known area of distribution have failed to find this species.

# Distribution

## Geographic Range

This species is endemic to the Province Nord of New Caledonia. Its distribution is limited to Mt Mandjélia in north-eastern Grande Terre. It occurs at elevations from 500 m - 760 m. The extent of occurrence is approximately 40 km², and the area of occupancy is estimated to be < 10 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 500

**Elevation Upper Limit (in metres above sea level):** 760

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

Although there is no detailed information on population size and trends for this species, it is assumed to have suffered a reduction in population size and extent in the past from habitat loss and degradation associated with clearance for agriculture, logging and wildfires. However, it is still relatively common at the sites where it occurs.

# Habitats and Ecology

This species inhabits mid-elevation closed forest; sheltering beneath litter and basking and foraging in sunlit-patches. It is terrestrial, diurnal, and active in sunlight.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

With such a limited extent of occurrence the greatest threat to *Caledoniscincus terma* is from further habitat loss and degradation resulting from wildfires, logging and possibly development of pine plantation. There is a high level of threat from the introduced ant *Wasmannia auropunctata*, which is known to decimate lizard populations (Jourdan *et al.* 2000, 2001). Habitat degradation by introduced ungulates (deer and pigs) damaging litter layers and predation by introduced mammals (rodents and feral cats) are also of concern.

# Conservation

This species does not occur in any protected area, therefore conservation measures should be implemented. Although it is common where it occurs, it is highly restricted and there are several ongoing threatening processes. Research and monitoring of the population status, habitat and threats for this species should be carried out.

# Bibliography

DRAFT

# *Celatiscincus similis - Sadlier, Smith & Bauer, 2006*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Celatiscincus - similis

**Common Names:** Scinque aux Hanches Pâles du Nord (French), Northern Pale-hipped Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv) (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

*Celatiscincus similis* is listed as Endangered because it has a restricted distribution and there is continuing decline in its extent of occurrence, area of occupancy and the extent and quality of its habitat. The population on the Taom massif is exposed to a high level of risk from nickel mining and the populations at lower elevation are at risk to habitat clearance and damage from wildfires. All populations are under threat to invasive species.

## Distribution

### Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known from four localities representing two widely-separated sub-populations in the north of Grande Terre. Two of these localities are on the northeast coast north of Hienghène (Ouaïème and Tao) and two on the northwest coast north of Voh (Síba and Mt Taom). It occurs at

elevations of up to 1,000 m. The extent of occurrence is approximately 650 km², and the area of occupancy is estimated to be < 100 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no data on population size and trends for this species. At low elevations it is assumed to have undergone a reduction in the area of occupation as a result of past habitat destruction through clearance for farming or associated with mining. Mining will also have destroyed significant areas of habitat on the summit of Taom. The species has not been recorded at either of the east coast sites since the original observations but is not uncommon at the high-elevation site on Mt Taom.

# Habitats and Ecology

This species occurs in closed forests at low elevations and, at high elevations (Mt Taom), it has been found in montane forest and maquis shrubland. It is diurnal, terrestrial and active in sunlight. It shelters beneath litter and stones, and basks and forages in light-gaps.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|

| | | |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The western populations of *Celatiscincus similis* are under threat of habitat loss as a result of the expanding nickel mine on the summit of Taom and the sporadic nickel mining that occurs at lower-elevations in the vicinity of Tinip. The populations in the east may be at risk to forest clearance for agriculture. Wildfires in adjacent savanna or maquis shrublands are a recurrent threat to forest margins, particularly at lower elevations. There is ongoing habitat degradation from introduced ungulates (deer and pigs) leading to an opening of the forest structure, damage to the litter layer and lowered humidity regimes. The introduced ant, *Wasmannia auropunctata*, is expected to have a detrimental impact on the skinks in low to mid-elevation forests (Jourdan *et al.* 2000, 2001). Introduced mammals (rodents and cats) are expected to exert a predation pressure.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not known to occur in any reserves but the Tao population may extend to the adjoining Réserve de Nature Sauvage du Mont Panié. No conservation management is currently being undertaken.

## Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Sadlier, R.A., Smith, S.A. and Bauer, A.M. 2006. A New Genus for the New Caledonian Scincid Lizard *Lygosoma euryotis* Werner, 1909, and the Description of a New Species. *Records of the Australian Museum* 58: 19-28.

DRAFT

# *Cryptoblepharus novocaledonicus - Mertens, 1928*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Cryptoblepharus - novocaledonicus

**Common Names:** New Caledonian Shore Skink (English), Scinque des Côtes de Nouvelle-Calédonie (French)
**Synonyms:** Cryptoblepharus boutonii novo-caledonicus Mertens, 1928 ;

**Taxonomic Note:**

# Red List Assessment

| Red List Status |
| --- |
| LC - Least Concern, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Cryptoblepharus novocaledonicus* is listed as Least Concern because it is very widespread, generally abundant and its habitat is largely secure.

# Distribution

## Geographic Range

This species is endemic to New Caledonia. Occurs on Grande Terre, Iles Belep (Ile Pott and Ile Art), Ile des Pins and Iles Loyauté (Maré, Lifou, Ouvéa), and almost all smaller islands. It occurs at elevations of up to 400 m. The extent of occurrence is approximately 18,500 km$^2$, and the area of occupancy is estimated to be < 500 km$^2$.

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 400

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size or trends for this species. Although there must have been some very localised habitat modifications that have affected this species, it is quick to colonise new habitat and man-made structures (breakwaters, wharves) and is unlikely to have suffered any significant change in distribution or abundance. In good habitat, population densities are exceptionally high.

# Habitats and Ecology

This species is almost invariably confined to a narrow supralittoral zone on rocky coastlines, raised coral and stony beaches; often on mangroves; rarely on sandy beaches. Four exceptional populations are known that are away from the coast (up to 5 km inland and up to 400 m elevation) on barren cuirasse maquis habitat (Ile Yandé, Sommet Poum, Port Boise and Plaine des Lacs). It is diurnal, terrestrial or arboreal and is active in sunlight. It shelters in crevices in rocks or driftwood, within boulder or gravel beaches, beneath stones, and in crevices or beneath loose bark on standing trees. It basks and forages on the ground, rock faces and on trunks and branches of standing maquis trees (to canopy height).

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Mangrove Vegetation Above High Tide Level | Suitable | - |
| Marine Intertidal -> Marine Intertidal - Rocky Shoreline | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

There are no significant threats to coastal populations of *Cryptoblepharus novocaledonicus*—nothing is likely to threaten their habitat on anything more than an extremely localised scale. Predation by introduced mammals (rodents and cats) is probably minimal, and it is unlikely that *Wasmannia auropunctata* would be an issue in such habitats. Two inland populations (Sommet Poum, Plaine des Lacs) are at very high risk of habitat loss from the expansion of mining where they occur and a third (Ile Yandé) is possibly at risk to future mining. The Port Boise population in woody maquis is at risk to wildfires, and all inland populations are expected to be at higher risk from predation by introduced mammals and the effects of invasive ants (*Wasmannia auropunctata* and, in the south, *Anoplolepis gracilipes*).

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in La réserve naturelle de l'île Leprédour and probably in any other reserves that include coastline (e.g. La réserve naturelle du Cap N'Dua and Réserve de Nature Sauvage de l'Ile de Pam). No conservation management is currently being undertaken.

## Bibliography

Bauer, A.M. and Sadlier, R.A. 1997. The terrestrial herpetofauna of the Loyalty Islands. *Pacific Science* 51: 76-90.

Bauer, A.M., and Sadlier, R.A. 1994. The terrestrial herpetofauna of the Ile des Pins, New Caledonia. *Pacific Science* 48(4): 353-366.

DRAFT

# *Emoia loyaltiensis - (Roux, 1913)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Emoia - loyaltiensis

**Common Names:** Loyalty Islands Emoia (English), Emoia des Iles Loyauté (French)
**Synonyms:** Lygosoma samoense loyaltiensis Roux, 1913 ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| VU - Vulnerable, B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Emoia loyaltiensis* is listed as Vulnerable because of the small area of occupancy and the ongoing threats that are contributing to a decline in the area of occupancy and population size.

# Distribution

## Geographic Range

This species is endemic to Province des Isles, New Caledonia. It is known only from the Iles Loyauté; recorded only on Maré and Lifou. It occurs at elevations of up to 150 m. The extent of occurrence is approximately 1,850 km² (based on the area of the islands), and the area of occupancy is estimated to be < 1,850 km².

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 150

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no quantitative information on population size and trends for this species. Because of its dependence on forested habitats it is assumed to have undergone a substantial reduction in the area of occupancy as a result of forest clearance and wildfires. Nonetheless, it remains widespread, and is relatively common at some tall closed-forest sites and is able to cope with a level of disturbance.

# Habitats and Ecology

This species occurs in secondary scrub, coastal forest and closed forest, and has been recorded in plantations. It is diurnal, arboreal and is active in sunlight. It shelters beneath loose bark and forages on trunks and branches.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The greatest threat to this species is the further loss and fragmentation of habitat due to clearance for agriculture and afforestation, and from wildfires. Another very serious threat arises from the infestation of closed forests by *Wasmannia auropunctata*, as these invasive ants are known to decimate lizard populations (Jourdan *et al*. 2000. 2001). Predation by introduced mammals (rodents and cats) is another potential concern.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 1997. The terrestrial herpetofauna of the Loyalty Islands. *Pacific Science* 51: 76-90.

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

# *Graciliscincus shonae - Sadlier, 1986*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Graciliscincus - shonae

**Common Names:** Gracile burrowing skink (English), Scinque fouisseur gracile (French), Sadlier's Skink ()
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| VU - Vulnerable, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

*Graciliscincus shonae* is listed as Vulnerable because it has a restricted distribution, it occurs in less than 10 locations, and there is continuing decline in its extent of occurrence, area of occupancy, and extent and quality of its habitat. Although it is found in 7 small reserves, all are impacted by development and mining in surrounding areas as well as invasives. Much of the extent of occurrence is unprotected.

## Distribution

### Geographic Range

*Graciliscincus shonae* is endemic to Province Sud, New Caledonia. It is known from approximately eight locations across southern Grande Terre (northernmost locality is Mt Dzumac). It occurs at elevations between 150 m and 900 m. The extent of occurrence is approximately 1,100 km², and the area of occupancy is estimated to be < 500 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

### Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 150

**Elevation Upper Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species. It is expected to have undergone a major reduction in area of occupancy and total population size as a consequence of the widespread clearance of closed forest habitat that has occurred for settlement, agriculture, logging and mining. Substantial areas of forest habitat have also been lost from recurrent wildfires in the adjacent maquis shrublands. These impacts are ongoing. This species is uncommon at all the localities it has been found.

# Habitats and Ecology

This species inhabits low to mid-elevation closed humid forests and montane forest. It is diurno-nocturnal, cryptozoic, and terrestrial. It shelters beneath logs, rocks and deep leaf litter, and in soil crevices. Usually forages in cover or in the open in low-light situations.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The greatest threat to this species is loss and fragmentation of habitat from clearance of closed forests (particularly by the rapidly expanding mining industry in the Grand Sud and Tontouta Valley area) and from wildfires in maquis shrublands damaging forest margins. Afforestation is a local threat in the Grand Sud. High-density populations of introduced ungulates (deer and pigs) threaten habitat quality, particularly by damaging the litter layer and disrupting cover (such as rocks and logs). In low to mid-elevation forests the introduced ant *Wasmannia auropunctata* is expected to have an adverse impact. Introduced mammals (rodents and pigs) are potential predators. The combined impact of these threats will be greatest on isolated forest remnants and in some cases is expected to lead to local extirpation of skinks.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). *Graciliscincus shonae* is present in Parc Provincial de la Rivière Bleue and a number of other reserves in the south including Mont Koghis, Forêt Cachée, Pic du Pins, Pic du Grand Kaori and Forêt Nord. No active conservation management is being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A. and Bauer, A.M. 2002. The scincid lizard *Graciliscincus shonae* (Lacertilia: Scincidae) from New Caledonia in the southwest Pacific: a review of the species' morphology, distribution and conservation status. *Zoologia Neocaledonica 5, Mémoires du Muséum national d'Histoire naturelle* 187: 269-276.


DRAFT

# *Kanakysaurus viviparus - Sadlier, Whitaker, Bauer & Smith, 2004*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Kanakysaurus - viviparus

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**
A population of *Kanakysaurus* on Dôme de Tiébaghi is genetically very close to *Kanakysaurus zebratus* yet is morphologically indistinguishable and genetically highly divergent from the *Kanakysaurus viviparus* with which it is sympatric. Whether this represents a distinct taxon or is the result of mitochondrial introgression awaits further research (Sadlier et al. 2009).

# Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Kanakysaurus viviparus* is listed as Endangered because it has a restricted distribution and is exposed to a high threat from mining at two locations, high threat from invasive species at a third, and some potential risk from mining at the remaining two (Iles Belep). On the islands, its proximity to human habitation and fire is potentially a threat. Ongoing threats from invasive species exist at all locations.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known from five locations: three in the far north of Grande Terre (the Poum and Dôme de Tiébaghi massifs, and Rivière Nehoué), and from the Iles Belep (both Ile Art and Ile Pott). It occurs at elevations of up to 500 m. The extent of occurrence is approximately 300 km², and the area of occupancy is estimated to be < 50 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 500

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species, but it is moderately abundant at some sites. It is expected to have undergone a substantial reduction in area of occupancy and total population size as a result of the past widespread clearance of closed forest habitat for agriculture and mining. Substantial areas of habitat have also been lost as a consequence of repeated wildfires. These impacts are ongoing.

# Habitats and Ecology

This species inhabits supralittoral vegetation, gallery forest, low elevation closed forest and maquis shrubland on bouldery cuirasses surfaces. This species is diurno-nocturnal, cryptozoic, and terrestrial. It shelters beneath logs, rocks and deep within boulder beds and forages in cover or in the open at night.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The greatest threat to this species is the loss of habitat as a consequence of the rapidly expanding mining industry on the Poum (plans to remove entire top of plateau) and Dôme de Tiébaghi (plans to remove most of the population) massifs. Mining may affect the Iles Belep populations in the future as they are also on ultramafic cuirasse surfaces.

Continued loss of habitat to wildfires is also a high risk. Introduced mammals (rodents, cats and pigs) are potential predators. On Grande Terre the high-density populations of introduced ungulates (deer and pigs—and also livestock at Rivière Nehoué) threaten habitat quality, particularly by damaging the litter layer and disrupting cover such as rocks and logs. *Wasmannia auropunctata* is expected to have an adverse impact in low to mid-elevation forest as this invasive ant is known to decimate lizard populations (Jourdan *et al.* 2000, 2001).

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). One of the locations where *Kanakysaurus viviparus* occurs (Rivière Nehoué) is administered as a recreation reserve but it receives high human use. Two areas on the upper part of Dôme de Tiébaghi are unofficially set aside as botanical reserves but to date this species has not been recorded within them. No conservation management is currently being undertaken. This species is in need of further conservation areas. Research is needed to establish population size and trends.

## Bibliography

Sadlier, R.A., Smith, S.A, Bauer, A.M. and Whitaker, A.H. 2004. A new genus and species of live-bearing scincid lizard (Reptilia: Scincidae) from New Caledonia. *Journal of herpetology* 38: 320-330.

Sadlier, R.A., Smith, S.A., Whitaker, A.H. and Bauer, A.M. 2009. A new live-bearing species of scincid lizard (Reptilia: Scincidae) from New Caledonia, southwest Pacific. *Pacific Science* 63: 123–136.

DRAFT

# *Kanakysaurus zebratus - Sadlier, Smith, Whitaker & Bauer, 2008*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Kanakysaurus - zebratus

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**
A population of *Kanakysaurus* on Dôme de Tiébaghi is genetically very close to *Kanakysaurus zebratus* yet is morphologically indistinguishable and genetically highly divergent from the *Kanakysaurus viviparus* with which it is sympatric. Whether this represents a distinct taxon or is the result of mitochondrial introgression awaits further research (Sadlier et al. 2009).

## Red List Assessment

| Red List Status |
|---|

EN - Endangered, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1)

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Kanakysaurus zebratus* is listed as Endangered because it has a restricted distribution and there is continuing decline in its extent of occurrence, area of occupancy, and extent and quality of its habitat. This species has very high ongoing level of threat from active mining at both known locations. It is also at risk to wildfires and potentially from invasive species.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known only from two locations on the ultramafic massifs of Kopéto–Paéoua and Koniambo on the central west coast of Grand Terre (but see Taxonomic Notes above). It occurs at elevations from 100 m to 900 m. The extent of occurrence is approximately 400 km², and the area of occupancy is estimated to be < 50 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 100

**Elevation Upper Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends for *Kanakysaurus zebratus* but at some locations it appears to be moderately common. It is assumed to have undergone a substantial reduction in area of occupancy and total population size as a result of the past widespread habitat removal by mining. Substantial areas of habitat have also been badly affected by repeated wildfires in maquis shrubland.

# Habitats and Ecology

This species inhabits low to mid-elevation closed forest, mid-elevation *Gymnostoma* forest, and mid- to high elevation maquis shrublands. Sites are invariably on bouldery surfaces (either laterite cuirasse or peridotite). It is diurno-nocturnal, cryptozoic and terrestrial. It shelters beneath rocks and deep within boulder beds. It usually forages in cover or in the open at night.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

This species is at high risk to further loss of habitat arising from the large-scale nickel mine developments underway on both Kopéto–Paéoua and Koniambo. Continued loss of habitat to wildfires is also a potential issue. The introduced ant *Wasmannia auropunctata* is expected to have a detrimental impact in low to mid-elevation forest sites as it is known to decimate lizard populations (Jourdan *et al.* 2000, 2001). Introduced mammals (rodents, cats and pigs) are potential predators.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération

No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

## Bibliography

Sadlier, R.A., Smith, S.A, Bauer, A.M. and Whitaker, A.H. 2004. A new genus and species of live-bearing scincid lizard (Reptilia: Scincidae) from New Caledonia. *Journal of herpetology* 38: 320-330.

Sadlier, R.A., Smith, S.A., Whitaker, A.H. and Bauer, A.M. 2009. A new live-bearing species of scincid lizard (Reptilia: Scincidae) from New Caledonia, southwest Pacific. *Pacific Science* 63: 123–136.

DRAFT

# *Lacertoides pardalis - Sadlier, Shea & Bauer, 1997*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Lacertoides - pardalis

**Common Names:** New Caledonian Leopard Skink (English), Scinque-léopard de Nouvelle-Calédonie (French)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| VU - Vulnerable, D2 (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

This species is listed as Vulnerable because it is present in only four locations. One subpopulation—although partly within a reserve (Kwa Néie)—is in close proximity to mining activities and requires monitoring. It is also at risk to

invasive species and possibly by wildfires. There is no data on population sizes although the subpopulation at Ka Yé Wagwé is thought to be the largest.

# Distribution

## Geographic Range

This species is endemic to Province Sud, New Caledonia. It is known from only four localities in the Plaine des Lacs region of southern Grande Terre—Ka Yé Wagwé, Kwa Néie, Montagne des Source, and Riviere Blanche. It occurs at elevations between 250 m and 900 m. The extent of occurrence is approximately 24 km², and the area of occupancy is estimated to be < 2 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 250

**Elevation Upper Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species, but observations at both localities indicate it occurs at low population density. It is unclear whether the repeated wildfires that damage the surrounding maquis vegetation have any lasting effect on habitat or numbers.

# Habitats and Ecology

This species inhabits peridotite outcrops in maquis shrubland and on forest margins. It is diurnal, terrestrial and is active in sunlight. It lives in deep rock crevices, and basks and forages on rock faces.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Marginal | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The population on the ridges of Foret Nord is in close proximity to a coal-fired smelter (< 1 km away) which could pose a threat to long-term habitat viability. *Lacertoides pardalis* is probably at risk to predation by introduced mammals (rodents and cats) and may be at risk to the infestation of the invasive ant *Anoplolepis gracilipes* that occurs on Kwa Néie.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in La réserve naturelle de la Forêt Nord. No specific conservation management is currently being undertaken. Ka Yé Wagwé is a high priority for protection (perhaps through establishing a protected area or extending the adjacent Reserve de Madeleine).

# Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Sadlier, R.A., Shea, G.M. and Bauer, A.M. 1997. A new genus and species of lizard (Squamata, Scincidae) from New Caledonia, southwest Pacific. *Zoologia Neocaledonica 4, Mémoires du Muséum national d'Histoire naturelle* 179: 379-385.

DRAFT

# *Lioscincus maruia - Sadlier, Whitaker & Bauer, 1998*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Lioscincus - maruia

**Common Names:** Scinque du Maquis Maruia (French), Maruia Maquis Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

*Lioscincus maruia* is listed as Endangered because it has a very restricted distribution, it is known from five locations and there is continuing decline in its habitat due to ongoing mining activities.

## Distribution

### Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known only from five ultramafic massifs on the central west coast of Grande Terre from Plateau de Tia in the north to Mé Adéo in the south. Surveys in surrounding areas have failed to locate additional populations. It occurs at elevations from 160 m to 1,000 m. The extent of occurrence is approximately 1,200 km², and the area of occupancy is estimated at 150 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

### Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 160

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

No quantitative data are available on population size and trends for this species. It is expected to have suffered a significant reduction in population size and extent in the past with habitat loss from mining on the ultramafic massifs and habitat degradation resulting from the recurrent wildfires that sweep through the maquis shrublands. It is still locally common at some sites, especially those on cuirasse surfaces.

# Habitats and Ecology

This species inhabits rocky maquis on ultramafic massifs. It is diurnal, terrestrial and is active in sunlight. It shelters beneath stones and in rock and soil crevices. It forages in the open and on rock surfaces; usually basks on rocks.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The most serious threats to this species are from further loss of maquis habitat resulting from the expanding mining on the ultramafic peaks on the central west coast and from habitat degradation caused by wildfires. Predation by introduced mammals (rodents and cats) may also be an issue.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

## Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Sadlier, R., Whitaker, A.H. and Bauer, A.M. 1998. *Lioscincus maruia*, a new species of lizard (Reptilia: Scincidae) from New Caledonia, southwest Pacific. *Pacific Science* 52(4): 334-341.

DRAFT

# *Lioscincus nigrofasciolatum - (Peters, 1869)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Lioscincus - nigrofasciolatum

**Common Names:** Green-bellied Tree Skink (English), Scinque Arboricole à Ventre Vert (French)
**Synonyms:** Lygosoma nigrofasciolatum Peters, 1869 ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| LC - Least Concern, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Lioscincus nigrofasciolatum* is listed as Least Concern because it is extremely widespread and is able to thrive in a wide range of disturbed and modified habitats.

# Distribution

## Geographic Range

This species is endemic to New Caledonia. It occurs throughout Grande Terre, and on Iles Belep, Ile des Pins, Iles Loyauté (Maré, Lifou, Ouvéa) and many smaller satellite islands. It can be found at elevations up to 1,000 m. The extent of occurrence is approximately 18,500 km² (estimated from the area of the islands), and the area of occupancy is estimated to be < 18,500 km².

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species. However, any decreases associated with the widespread clearance of wooded habitats from low and mid-elevation areas in the past will have been partly offset by this species' ability to occupy modified habitats. It is still locally common at some sites.

# Habitats and Ecology

This species occurs in a very wide range of open and wooded habitats, including coastal sites, mangroves, littoral vegetation, savannah, sclerophyll forest, closed forest, montane forest and maquis shrublands. Also present in modified landscapes (farmland and plantations) and well-vegetated urban areas. It is diurnal, arboreal/terrestrial and is active in sunlight. It shelters in beneath stones, in crevices and holes in soil, rock and trees, and under loose bark. It forages from ground level to canopy height; typically basks on rocks and trees.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Artificial/Terrestrial -> Artificial/Terrestrial - Arable Land | Marginal | - |
| Artificial/Terrestrial -> Artificial/Terrestrial - Plantations | Marginal | - |
| Artificial/Terrestrial -> Artificial/Terrestrial - Urban Areas | Marginal | - |
| Forest -> Forest - Subtropical/Tropical Mangrove Vegetation Above High Tide Level | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Savanna -> Savanna - Moist | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

This species is threatened by further loss and fragmentation of wooded habitats through clearance for agriculture and afforestation—and to a lesser extent by mining and wildfires—particularly when these result in a highly simplified vegetation (e.g. exotic pasture). There is a potentially significant threat from *Wasmannia auropunctatus* at low to mid-elevations as this introduced ant is known to decimate lizard populations. Predation by introduced mammals (rodents and cats) is an ever-present issue.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in most reserves throughout New Caledonia. No specific conservation management is currently being undertaken.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

# *Lioscincus novaecaledoniae - (Parker, 1926)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Lioscincus - novaecaledoniae

**Common Names:** Blue-mouthed Skink (English), Scinque à Bouche Bleue (French)
**Synonyms:** Lygosoma novae-caledoniae Parker, 1926 ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| LC - Least Concern, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

Although *Lioscincus novaecaledoniae* has been recorded from just six locations—several of which are directly threatened by development—the fact these known locations include widely different types of habitat and cover a large part of Grande Terre means this species is expected to occur much more widely. It has been found in some large areas of habitat and extensive areas of potential habitat exist. Hence, it is listed as Least Concern.

# Distribution

## Geographic Range

This species is endemic to New Caledonia. It is known from six widespread locations on Grande Terre between Dôme de Tiébaghi and the Panié massif in the north and La Foa in the south. It likely occurs much more widely given presence in different habitat types. It can be found at elevations up to 400 m. The extent of occurrence is approximately 7,500 km², and the area of occupancy is estimated to be < 200 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 400

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends for this species but is presumed to have suffered a substantial reduction in population size and extent in the past from the loss of lowland forest habitat from clearance for agriculture, mining and logging, and from the effects of wildfires.

# Habitats and Ecology

This species has been recorded from supralittoral vegetation, low and mid-elevation closed forest, sclerophyll forest and vinelands. It is diurnal and arboreal, spending the night sleeping on the outer twigs of trees and presumably foraging in the canopy by day.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The greatest threat to *Lioscincus novaecaledoniae* is from further loss or degradation of its habitat through clearance for agriculture and mining. This is a particular problem on Dôme de Tiébaghi where expansion of the nickel mine will result in habitat removal; at Gouaro-Déva where habitat is at risk to changed farm management and tourist development; and possibly on Mt Aoupinié from logging. The habitat is also at risk to wildfires and damage from introduced ungulates (deer and pigs). The introduced ant, *Wasmannia auropunctata*, is another potentially serious threat as it is known to decimate lizard populations (Jourdan *et al.* 2000, 2001). Predation by introduced mammals (rodents and cats) may also be an issue.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in the Réserve de Nature Sauvage du Massif de l'Aoupinié. No conservation management is currently being undertaken.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

# *Lioscincus steindachneri - Bocage, 1873*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Lioscincus - steindachneri

**Common Names:** Scinque des Forêts à Lèvre Blanches (French), White-lipped Forest Skink (English)
**Synonyms:** Lygosoma steindachneri (Bocage, 1873) ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| EN - Endangered, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

*Lioscincus steindachneri* is listed as Endangered because it has a restricted distribution, is known from only three locations, and there is continuing decline in the extent and quality of its habitat. At two locations—Aoupinié and Néoua on the central ranges—the species appears to be restricted to riparian habitat. At the Néoua location the forest is becoming increasingly fragmented; at the Aoupinié location the population is heavily impacted by siltation and weed invasion in the streambeds (recent surveys have failed to find the species at sites of previous collection). This species remains relatively secure at the Panié massif, which is the largest subpopulation and the most extensive area of habitat, but even there, forest clearance and wildfires are encroaching from the lower slopes. It faces ongoing threats from invasive species at all locations.

## Distribution

### Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known from just seven sites in three locations in the mountain ranges of central and northeastern Grande Terre—the Panié massif, Mt Aoupinié and Néoua. It occurs at elevations between 200 m and 1,110 m. The extent of occurrence is approximately 3,000 km², and the area of occupancy is estimated to be < 500 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 200

**Elevation Upper Limit (in metres above sea level):** 1,100

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends for this species. It is expected that there has been a reduction in population size and extent resulting from past destruction of mid-elevation forests from clearance for agriculture and logging. This species can be locally common in good habitat.

# Habitats and Ecology

This species inhabits mid-elevation closed forest and is almost invariably associated with watercourses. It is diurnal, terrestrial and cryptozoic. It shelters beneath streamside stones and in debris dams and leaf-packs. It is not known where and when it forages.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The main threats to this species are from further destruction of closed forest habitat along streams from logging, and degradation of streambed habitats by siltation arising from forest destruction within the catchment or forest degradation from high-density deer and pig populations. Pigs are also likely to lead to damage in streambeds from constantly turning cover (leaf debris and stones). Predation by introduced mammals (rodents, cats and pigs) is a threat.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in Réserve de Nature Sauvage du Mt Panié and Réserve de Nature Sauvage du Massif de l'Aoupinié. No conservation management is currently being undertaken but this species may potentially benefit from proposed predator control in the La Guèn catchment on Mt Panié.

## Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

DRAFT

# *Lioscincus tillieri - Ineich & Sadlier, 1991*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Lioscincus - tillieri

**Common Names:** Tiller's Maquis Skink (English), Scinque du Maquis de Tillier (French)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| NT - Near Threatened, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

Although the extent of occurrence and area of occupancy are well below the thresholds for a threatened category, *Lioscincus tillieri* does not qualify at present because the number of known locations is just exceeded, the populations are probably not as fragmented as they appear, and there are no data on population trends. However, the threats posed by the rapidly expanding mining industry in the Grand Sud and Tontouta Valley, afforestation in the Grand Sud, and the recent naturalisation of the ant *Anoplolepis gracilipes* combine to mean this situation could deteriorate quickly. Therefore, this species is listed as Near Threatened.

# Distribution

## Geographic Range

This species is endemic to Province Sud, New Caledonia. It is known from thirteen localities across the southern part of Grande Terre between the Tontouta Valley and Mt Humboldt in the north and Baie de Prony and Port Boise in the south. It occurs at elevations of up to 1,000 m. The extent of occurrence is approximately 2,500 km$^2$, and the area of occupancy is estimated to be < 500 km$^2$.

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

No quantitative data are available on population size and trends for this species. Although recurrent wildfires are likely to have degraded maquis habitats (through simplification of the vegetation) and caused a reduction in skink population density, these fires have at the same time probably greatly increased the area of maquis shrubland habitat available through the destruction of closed forests. In the Grand Sud habitat has been lost to mining and afforestation. *Lioscincus tillieri* is still relatively common at some sites.

# Habitats and Ecology

This species inhabits open maquis, wetland maquis and grasslands. It is diurnal, terrestrial and is active in sunlight. It shelters beneath stones and in dense vegetation. It forages on the ground; usually basks low (< 1 m above ground) in shrubs, grasses and sedges (occasionally on rocks).

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Grassland -> Grassland - Subtropical/Tropical Seasonally Wet/Flooded | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

*Lioscincus tillieri* is at constant risk to habitat degradation and loss arising from the frequent wildfires that burn maquis shrubland habitats. In the Grand Sud extensive areas of maquis habitat are under threat from the expanding mining industry and from afforestation, and mining also threatens habitat in the Tontouta Valley–Mt Vulcain area. In woody maquis, this species may be at risk to the introduced ant *Wasmannia auropunctata*, which is known to decimate lizard populations (Jourdan *et al*. 2000, 2001). It is also likely to be at risk to another invasive ant, *Anoplolepis gracilipes*, which has recently colonised the Grand Sud area. Predation by introduced mammals (rodents and cats) is an ever-present threat.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in Parc Provincial de la Rivière Bleue, La réserve naturelle intégrale

de la Montagnes des Sources, and a number of other reserves in the south including Mt Humboldt, Mt Mou, Forêt Cachée and Forêt Nord. No active conservation management is currently being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Ineich, I. and Sadlier, R.A. 1991. A new species of scincid lizard from New Caledonia (Reptilia: Lacertilia: Scincidae). *Zoologia Neocaledonica 2, Mémoires du Muséum National d'Histoire Naturelle* 149: 343-347.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A. and Bauer, A.M. 1999. The scincid lizard *Lioscincus tillieri* (Reptilia: Scincidae) from New Caledonia in the southwest Pacific: new information on the species' biology, distribution and morphology. *Records of the Australian Museum* 51: 93-98.


DRAFT

# *Lioscincus vivae - Sadlier, Bauer, Whitaker & Smith, 2004*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Lioscincus - vivae

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii,v) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Lioscincus vivae* is listed as Critically Endangered because it has a very restricted distribution, is known from a single location, and surveys at lower elevations and in surrounding areas have failed to locate additional populations. The species faces a high level of threat from intensive and ongoing mining activity. Invasive species and wildfires are additional threats.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It has been recorded only from the Kopéto–Paéoua massif on the central west coast of Grande Terre. It occurs at elevations between 500 m and 1,000 m. The extent of occurrence is approximately 48 km², and the area of occupancy is estimated to be < 25 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 500

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species. It is presumed there has been a significant reduction population size and extent as a result of habitat loss associated with mining. It is also likely that maquis shrubland habitats have been degraded by wildfires although the impact of this have been compensated to some extent by these fires opening up montane closed forests. *Lioscincus vivae* is locally common in good habitat.

# Habitats and Ecology

This species inhabits maquis shrubland, open forest, and the margins of closed forest. It is diurnal, terrestrial and is active in sunlight. It shelters beneath stones and logs; basks and forages on the ground.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Marginal | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The greatest threat to this species is further loss of habitat resulting from the expansion of the nickel mines on the Kopéto–Paéoua massif. Wildfires are a lesser threat, as is habitat degradation from introduced ungulates (deer and pigs). Predation by rodents and cats is also an issue.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

# Bibliography

DRAFT

# *Marmorosphax boulinda - Sadlier, Smith, Bauer & Whitaker, 2009*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Marmorosphax - boulinda

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| VU - Vulnerable, D2 (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

*Marmorosphax boulinda* is listed as Vulnerable because it is known from only a single location with a very small area of occupancy. If mining was to commence on massif Boulinda, or if a wildfire damaged a substantial area of the habitat for this species, it could trigger a status of Critically Endangered in a very short period of time.

## Distribution

### Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known only from a single location near the summit of the ultramafic massif Boulinda, on the central west coast of Grande Terre. It occurs at elevations from 900 m to 1,000 m. The extent of occurrence is approximately 67 km² (calculated from polygon map), but it is expected to occur more widely in the Boulinda massif. The area of occupancy is estimated to be 1 km².

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 900

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends for *Marmorosphax boulinda*, but destruction of its montane forest habitat by past mining activates and from recurrent wildfires in the adjacent maquis shrublands is assumed to have reduced the population size and extent.

# Habitats and Ecology

This species inhabits closed montane forests. It is diurno-nocturnal, cryptozoic and terrestrial. It shelters beneath logs, rocks and deep leaf litter, and forages in cover.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The greatest threat to this species is from further habitat destruction and fragmentation. Mineral exploration and mining has occurred on the Boulinda massif in the past and with rapidly expanding mining industry it is expected this will recommence. Montane forest remnants and forest margins are also vulnerable to the recurrent wildfires in the adjacent maquis shrubland. Introduced mammals (rodents, cats and pigs) are a potential predation risk and introduced ungulates (deer and pigs) threaten habitat quality, particularly through damaging the litter layer.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken. Given highly limited area of occupancy, formal protection of existing habitat for this species is a high priority.

## Bibliography

Sadlier, R.A., Smith, S.A., Bauer, A.M. and Whitaker, A.H. 2009. Three new species of skink in the genus *Marmorosphax* Sadlier (Squamata: Scincidae) from New Caledonia. *Zoologia Neocaledonica 7, Mémoires du Muséum National d'Histoire Naturelle* 198: 373–390.

DRAFT

# *Marmorosphax kaala - Sadlier, Smith, Bauer & Whitaker, 2009*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Marmorosphax - kaala

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) | |
| Possibly Extinct: | False |

| | |
|---|---|
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Marmorosphax kaala* is listed as Critically Endangered because it has a very restricted distribution, it is known from only a single location under and there is continuing decline in the extent and quality of its habitat due to ongoing threat from mining.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known only from two sites in one location on the summit of the ultramafic massif Kaala, on the northern west coast of Grande Terre. It occurs at elevations between 300 m and 900 m. The extent of occurrence is approximately 18 km² (calculated from polygon map) but expected to occur more widely on the Kaala massif. The area of occupancy is estimated to be < 2 km².

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 300

**Elevation Upper Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends for *Marmorosphax kaala*. It is presumed to have suffered a substantial reduction population size and extent resulting from past destruction of its montane forest habitat by mining activities and from recurrent wildfires in the adjacent maquis shrublands.

# Habitats and Ecology

This species inhabits mid-elevation closed forest and montane forest. It is diurno-nocturnal, cryptozoic and terrestrial. It shelters beneath logs, rocks and deep leaf litter, and forages in cover.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The greatest threat to this species is from further habitat destruction leading to a reduction in the area of occupancy. Large areas of the Kaala massif have been affected by mining the industry there is expanding at both mid- and high elevation. The remaining forest areas are also at risk to peripheral damage and reduction in extent from the recurrent wildfires in the adjacent maquis shrubland. Introduced mammals (rodents, cats and pigs) are a potential predation risk and high-density populations of introduced ungulates (deer and pigs) threaten habitat quality, particularly through damaging the litter layer.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

# Bibliography

Sadlier, R.A., Smith, S.A., Bauer, A.M. and Whitaker, A.H. 2009. Three new species of skink in the genus *Marmorosphax* Sadlier (Squamata: Scincidae) from New Caledonia. *Zoologia Neocaledonica 7, Mémoires du Muséum National d'Histoire Naturelle* 198: 373–390.

DRAFT

# *Marmorosphax taom - Sadlier, Smith, Bauer & Whitaker, 2009*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Marmorosphax - taom

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii,v)+2ab(i,ii,iii,v) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Critically Endangered because it has a highly restricted distribution and is under high level of threat from mining. Also there are ongoing threats from invasive species and wildfires.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known only from the summit area of the ultramafic massif Mount Taom, on the northwestern coast of Grande Terre. It occurs at elevations between 900 m and 1,100 m.The extent of occurrence is approximately 2 km², but it is expected to occur more widely on the Kaala massif. The area of occupancy is estimated to be 1 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 900

**Elevation Upper Limit (in metres above sea level):** 1,100

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends for this species. It is expected to have undergone a substantial reduction in population size and extent as a result of past destruction of its montane forest habitat by mining activities and from recurrent wildfires in the adjacent maquis shrublands, although the effect of this will have been offset to some extent by its occupation of dense maquis fernlands.

# Habitats and Ecology

This species inhabits closed montane forests and maquis fernlands. It is diurno-nocturnal, cryptozoic; terrestrial. It shelters beneath rocks and dense vegetation and forages in cover.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

*Marmorosphax taom* is threatened by further habitat destruction from the expansion of the mining on the massif, resulting in a reduction in the area of occupancy. The part of the population in the maquis is under constant threat from wildfires, which also leads to peripheral damage and reduction in extent of montane forest remnants. Introduced mammals (rodents, cats and pigs) are a potential predation risk and introduced ungulates (deer and pigs) threaten habitat quality, particularly the litter layer.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

## Bibliography

Sadlier, R.A., Smith, S.A., Bauer, A.M. and Whitaker, A.H. 2009. Three new species of skink in the genus *Marmorosphax* Sadlier (Squamata: Scincidae) from New Caledonia. *Zoologia Neocaledonica 7, Mémoires du Muséum National d'Histoire Naturelle* 198: 373–390.

DRAFT

# *Marmorosphax tricolor - (Bavay, 1869)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Marmorosphax - tricolor

**Common Names:** Marble-throated Skink (English), Scinque à Gorge Marbrée (French)
**Synonyms:** Leiolopisma tricolor (Bavay, 1869) ; Lygosoma tricolor Bavay, 1869 ;

**Taxonomic Note:**
Recent morphometric and genetic data suggests that, as presently defined, *Marmorosphax tricolor* sensu Bavay 1879 may include several cryptic species some of which have relatively confined distributions. The neotype of *Marmorosphax tricolor* is from Mount Aoupinié (Sadlier 1986).

# Red List Assessment

| Red List Status |
| --- |
| LC - Least Concern, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Least Concern because it is very widespread, and is generally abundant wherever it occurs. In addition, it is present in many protected areas.

# Distribution

## Geographic Range

This species is endemic to New Caledonia. *Marmorosphax tricolor s.l.* is found throughout Grande Terre with the exception of the far northwest (northernmost location in the west is the Koniambo massif and in the east is Mount Mandjélia). It occurs at elevations of up to 1,000 m. The extent of occurrence is approximately 10,000 km$^2$, and the area of occupancy is estimated to be 6,000 km$^2$.

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species but it can occur at very high population densities in favourable habitats. It is presumed to have suffered a substantial reduction in area of occupancy—and hence total population size—as a result of the past widespread clearance of closed forest habitat for settlement, agriculture, afforestation and mining. Substantial areas of habitat have also been lost as a consequence of repeated wildfires. These impacts are ongoing.

# Habitats and Ecology

This species inhabits closed humid forests at low to mid-elevations, montane forest and high-elevation maquis shrublands. It is diurno-nocturnal, cryptozoic; terrestrial. It shelters beneath logs, rocks and deep leaf litter, and in soil crevices. Usually, it forages in cover or in the open in low-light situations.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The greatest threats to this species are further loss, fragmentation and degradation of closed forest habitat. The likely cause of this varies across the species' range and with elevation, but includes clearance for agriculture, mining, logging and afforestation, and damage from wildfires to forest margins. These impacts will be greatest on isolated forest remnants and can, in some cases, be expected to lead to local extirpation of skinks. The effect of fire on high elevation humid maquis shrublands is also a threat. Introduced mammals (rodents, cats and pigs) are potential predators; and high-density populations of introduced ungulates (deer and pigs) threaten habitat quality, particularly by damaging the litter layer and disrupting cover (such as rocks and logs). The introduced ant *Wasmannia auropunctata* is expected to have an adverse impact in low to mid-elevation forest but this likely to be lower than on other lizard species.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in most, if not all, humid forest reserves on Grande Terre. No specific conservation management is currently being undertaken for this species.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A. 1986. A review of the scincid lizards of New Caledonia. *Records of the Australian Museum* 39: 1-66.


DRAFT

# *Nannoscincus exos - Bauer & Sadlier, 2002*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Nannoscincus - exos

**Common Names:** Scinque Nain du Nord (French), Northern Dwarf Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii,v)+2ab(i,ii,iii,v) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Critically Endangered because it has a very restricted distribution, it is known from two locations, the habitat is severely fragmented, and there is very high risk from wildfires and invasive species throughout its range.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known only from two locations on the Tnâno massif (near Hienghène) in the north-eastern ranges of Grande Terre. Locations are disjunct, about 10-20 km apart. It occurs at elevations between 100 m and 800 m. The extent of occurrence is approximately 100 km², and the area of occupancy is estimated to be 2 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 100

**Elevation Upper Limit (in metres above sea level):** 800

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends (only two specimens known). It is presumed to have suffered a reduction in area of occupancy from the loss of closed forest habitat at low-elevation through clearance and wildfires.

# Habitats and Ecology

This species inhabits closed humid forest. It is cryptozoic, semi-fossorial; terrestrial. It shelters beneath logs and stones and forages through leaf litter.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The greatest threat to this species is from the high densities of the introduce ant *Wasmannia auropunctata* in low to mid-elevation closed forests as it is known to decimate lizard populations (Jourdan *et al.* 2000, 2001). It is also under threat to further habitat loss at low-elevation from clearance of closed humid forest for agriculture and damage to forest margins from wildfires in the adjacent savannah. Habitat degradation by introduced ungulates (deer and pigs), leading to lower humidity, and from pigs disturbing the litter layer and cover are other significant issues. Predation by rodents may be a risk.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A., Bauer, A.M. and Whitaker, A.H. 2002. The scincid lizard genus *Nannoscincus* Günther from New Caledonia in the southwest Pacific: a review of the morphology and distribution of species in the *Nannoscincus mariei* species group, including the description of three new species from the Province Nord. *Zoologia Neocaledonica 5, Mémoires du Muséum national d'Histoire naturelle* 187: 233-255.


DRAFT

# *Nannoscincus garrulus - Sadlier, Bauer & Smith, 2006*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Nannoscincus - garrulus

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Endangered because it is known from two locations over a small range (approximately 5 km apart). The existing forest remnants are disjunct and present as remnant patches and habitat quality has declined markedly in the last five years due to invasion by deer. Wildfires pose a constant threat to habitat extent and area of occupancy. The larger subpopulation is within a reserve but the other is potentially threatened by mining.

# Distribution

## Geographic Range

This species is endemic to Province Sud, New Caledonia. It is known only from Pic Ningua and Mount Çidoa, south of Thio in the central ranges of southern Grande Terre. It occurs at elevations above 900 m. The extent of occurrence is approximately 36 km², and the area of occupancy is estimated to be < 10 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species but it appears to be locally common. It is presumed to have suffered a significant reduction in area of occupancy from the loss of closed montane forest habitat that has occurred because of extensive mining and widespread wildfires on both peaks.

# Habitats and Ecology

This species inhabits closed montane forest. It is cryptozoic, semi-fossorial; terrestrial. It shelters beneath logs and stones and forages through leaf litter.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

*Nannoscincus garrulus* is under particular threat to further habitat loss and fragmentation. At present this species is known only in forest remnants that are vulnerable to damage or destruction from the nickel mining that is occurring on the massif. Wildfires in the adjacent maquis shrublands are an added threat as damage forest margins, reducing the forest extent. Habitat degradation by introduced ungulates (deer and pigs), leading to lower humidity, and from pigs disturbing the litter layer and cover are other significant issues. Predation by rodents may be a risk.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in La réserve naturelle du Pic Ningua. No specific conservation management is currently being undertaken.

# Bibliography

Sadlier, R.A, Bauer, A.M. and Smith, S.A. 2006. A new species of *Nannoscincus* Günther (Squamata: Scincidae) from high elevation forest in southern New Caledonia. *Records of the Australian Museum* 58: 29–36.

# *Nannoscincus greeri - Sadlier, 1987*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Nannoscincus - greeri

**Common Names:** Scinque Nain de Greer (French), Greer's Dwarf Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B1ab(i,ii,iii,v)+2ab(i,ii,iii,v) (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

This species is listed as Endangered because it has a restricted and severely fragmented range, it is known from three locations, and there is continuing decline in the extent and quality of habitat.

## Distribution

### Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known from three locations on the central east coast of Grande Terre between Houaïlou and Poindimié. Although surveys in other areas have so far failed to find additional populations, it is expected to occur more widely as extensive areas of habitat remain. It occurs at elevations between 100 m and 500 m. The extent of occurrence is approximately 500 km², and the area of occupancy is estimated to be 10 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 100

**Elevation Upper Limit (in metres above sea level):** 500

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

It is expected that this species has suffered a substantial reduction in area of occupancy and population size from the widespread loss of closed forest habitat at low to mid-elevation through clearance for agriculture and logging, and from the effects of wildfires. Although there are no quantitative data on population size and trends, the population of this skink on Mount Koyapwa, Poindimié, completely collapsed following the arrival of *Wasmannia auropunctata* at the site and may now be locally extinct (Sadlier *et al.* 2002).

# Habitats and Ecology

This species inhabits closed humid forest. It is cryptozoic, semi-fossorial; terrestrial. It shelters beneath logs and stones and forages through leaf litter.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The greatest threats to *Nannoscincus greeri* appear to be further habitat loss and the effect of the introduced ant *Wasmannia auropunctata*. Closed humid forests at low to mid-elevation are increasingly fragmented on the central east coast and any further clearance for agriculture, afforestation or logging, or destruction by wildfires, will lead to further reductions in extent and population size—and possibly local extinction. *Wasmannia auropunctata* is now widespread through the range of *Nannoscincus greeri* but is likely to be having a continuing effect. Habitat degradation by introduced ungulates (deer and pigs), leading to lower humidity, and from pigs disturbing the litter layer and cover are other significant issues, and predation by rodents may be a risk.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A., Bauer, A.M. and Whitaker, A.H. 2002. The scincid lizard genus *Nannoscincus* Günther from New Caledonia in the southwest Pacific: a review of the morphology and distribution of species in the *Nannoscincus mariei* species group, including the description of three new species from the Province Nord. *Zoologia Neocaledonica 5, Mémoires du Muséum national d'Histoire naturelle* 187: 233-255.


DRAFT

# *Nannoscincus humectus - Bauer & Sadlier, 2002*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Nannoscincus - humectus

**Common Names:** Scinque Nain de la Forêt Plate (French), Forêt Plate Dwarf Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

# Red List Assessment

| Red List Status |
| --- |
| EN - Endangered, B1ab(i,ii,iii,v)+2ab(i,ii,iii,v) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

This species is listed as Endangered because it has a restricted distribution, it is known from only two subpopulations and there is continuing decline in the extent and quality of its habitat due to loss to agriculture and wildfires.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known from two locations on the dividing ranges to the east of Koné, central Grande Terre. It occurs at elevations between 500 m and 700 m. The extent of occurrence is approximately 160 km², and the area of occupancy is estimated to be < 30 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 500

**Elevation Upper Limit (in metres above sea level):** 700

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends for this species. It is known from two subpopulations of which the larger is presumed to have suffered a reduction in area of occupancy from the loss of closed forest habitat at low-elevation to mid-elevations through clearance for agriculture, logging and wildfires. This species is still common at the other subpopulation where it has been found (Forêt Plate). Both populations are at risk to invasive species.

# Habitats and Ecology

This species inhabits closed humid forest. It is cryptozoic, semi-fossorial; terrestrial. It shelters beneath logs and stones and forages through leaf litter.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

*Nannoscincus humectus* is at risk to further habitat loss arising from habitat clearance for agriculture —and perhaps logging— and damage to forest margins from wildfires in the adjacent savanna. It is also threatened by habitat degradation by introduced ungulates (deer and pigs), leading to lower humidity, and from pigs disturbing the litter layer and cover. Infestations of the introduced ant *Wasmannia auropunctata* are also expected to be an issue as it is known to decimate lizard populations (Jourdan *et al.* 2000, 2001). Predation by rodents may be a risk.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A., Bauer, A.M. and Whitaker, A.H. 2002. The scincid lizard genus *Nannoscincus* Günther from New Caledonia in the southwest Pacific: a review of the morphology and distribution of species in the *Nannoscincus mariei* species group, including the description of three new species from the Province Nord. *Zoologia Neocaledonica 5, Mémoires du Muséum national d'Histoire naturelle* 187: 233-255.

DRAFT

# *Nannoscincus manautei - Sadlier, Bauer, Whitaker & Smith, 2004*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Nannoscincus - manautei

**Common Names:** No Common Names
**Synonyms:** No Synonyms

**Taxonomic Note:**

# Red List Assessment

| Red List Status | |
|---|---|
| CR Critically Endangered, B1ab(i,ii,iii,v)+2ab(i,ii,iii,v) (IUCN version 3.1) | |
| Possibly Extinct: | False |
| Possibly Extinct Candidate: | False |
| Date Last Seen: | |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Nannoscincus manautei* is listed as Critically Endangered because it is known from a single massif where it is confined to closed forest, thus having a highly restricted area of occupancy. There is a severe threat from ongoing mining activity that is reducing both the extent of occurrence and area of occupancy. There are also some threats from invasive species.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known only from four sites on the summit of the isolated ultramafic Kopéto massif on the central west coast of Grande Terre. It occurs at elevations between 750 m and 1,000 m. The extent of occurrence is approximately 8 km², and the area of occupancy is estimated to be 2 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 750

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

## Population

There are no quantitative data on population size and trends for this species but it appears to be localised and uncommon. It is assumed to have suffered a significant reduction in area of occupancy as a result of the removal of closed montane forest associated with the extensive nickel mining that has occurred at upper elevations on Kopéto. Wildfires from adjacent maquis shrublands may have contributed to habitat loss through damaging forest margins.

## Habitats and Ecology

This species inhabits closed montane forest. It is cryptozoic, semi-fossorial; terrestrial. It shelters beneath logs, stones and litter, and forages through leaf litter.

### IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

### Systems

**System:** Terrestrial

## Threats

There is a major threat to *Nannoscincus manautei* from further habitat loss arising from the expansion of nickel mining on the Kopéto–Paéoua massif. Habitat degradation by introduced ungulates (deer and pigs), leading to lower humidity, and from pigs disturbing the litter layer and cover are other significant concerns. There may be a low level of risk from wildfires in the adjacent maquis shrublands damaging forest margins reducing the forest extent of small forest remnants. The invasive ant *Wasmannia auropunctata* has also recently been recorded at high level on the massif but its potential impact is unknown as ant populations are unlikely to flourish at that elevation.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

## Bibliography

Sadlier, R.A., Bauer, A.M., Whitaker, A.H. and Smith, S.A. 2004. Two New Species of Scincid Lizards (Squamata) from the Massif de Kopéto, New Caledonia. *Proceedings of the California Academy of Sciences* 55(11): 208-221.

DRAFT

# *Nannoscincus mariei - (Bavay, 1869)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Nannoscincus - mariei

**Common Names:** Earless Dwarf Skink (English), Scinque Nain Sans Oreilles (French)
**Synonyms:** Lygosoma mariae (Bavay, 1869) ; Anotis mariei Bavay, 1869 ;

**Taxonomic Note:**
Morphological variation across the species' range indicates a degree of divergence associated with the main sub-populations. The taxonomic significance of this requires further investigation.

## Red List Assessment

| Red List Status |
|---|
| VU - Vulnerable, B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Nannoscincus mariei s.l.* is listed as Vulnerable. It is found at more than ten large and small locations, with some of the larger sites being extensive and intact (not highly fragmented). However, despite being found in some relatively large forest patches, it is assigned to Vulnerable because of its habitat specificity, threats to habitat in terms of loss and fragmentation, the isolation of many populations, and the impact of invasive species (particularly fire ants), all combined to indicate that populations are probably declining.

## Distribution

## Geographic Range

*Nannoscincus mariei s.l.* is endemic to Province Sud, New Caledonia. It is widespread across the southern part of Grande Terre (northernmost localities are Mt Vulcain and the Rivière Ngoi). It occurs at elevations between 150 m and 1,100 m. The extent of occurrence is approximately 2,500 km², and the area of occupancy is estimated to be < 1,000 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 150

**Elevation Upper Limit (in metres above sea level):** 1,100

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends for *Nannoscincus mariei s.l.* It is expected to have undergone a substantial reduction in area of occupancy as a result of the clearance of closed humid forests at low to mid-elevation for agriculture, and of mid- to high elevation closed forests by nickel mining. Wildfires from adjacent maquis shrublands will have also contributed to habitat loss through damaging forest margins. This species is still locally common at some sites.

# Habitats and Ecology

This species inhabits closed humid forest and closed montane forest. It is cryptozoic, semi-fossorial; terrestrial. It shelters beneath logs, stones and litter, and in soil crevices, and forages through the leaf litter.

## IUCN Habitats Classification Scheme

## Systems

**System:** Terrestrial

## Threats

The greatest threat to this species is the loss of further habitat. Many of the remaining population are restricted to closed forest remnants and this fragmentation makes the skinks particularly vulnerable to localised extinctions. Populations in the south and west are at highest risk because of the rapidly expanding nickel mining industry in the Grand Sud and in the vicinity of the Tontouta Valley. Other threats include the loss or degradation of closed forest habitat from wildfires in the adjacent savanna and maquis, and the effects of introduced ungulates (deer and pigs) on habitat quality, particularly the effect of pigs disrupting the litter layer and disturbing cover. At low to mid-elevation sites the occurrence of the introduced ant, *Wasmannia auropunctata*, in closed forest habitats may have a detrimental impact as it has been shown to decimate lizard populations (Jourdan *et al.* 2000, 2001). An additional threat in the south is the increasing area of indigenous vegetation being converted to exotic forestry. Predation by rodents is a possibility.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in Parc Provincial de la Rivière Bleue and a number of other reserves in the south including Mont Mou, Mont Koghis, Pic du Pin and Forêt Nord. No active conservation management is being undertaken.

## Bibliography

DRAFT

# *Nannoscincus rankini - Sadlier, 1987*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Nannoscincus - rankini

**Common Names:** Scinque Nain de Rankin (French), Rankin's Dwarf Skink (English)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |

VU - Vulnerable, D2 (IUCN version 3.1)

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Nannoscincus rankini* is listed as Vulnerable because it is known only from a single very small area. Despite some habitat damage from deer and pigs, and low level threats from other invasive species, there is currently no evidence of decline. However, a significant increase in the density of invasive species or a stochastic event such as a cyclone could push the status to Critically Endangered.

# Distribution

## Geographic Range

This species is endemic to Province Nord, New Caledonia. It is known only from two sites at the summit of Mount Aoupinié, in the central ranges west of Ponérihouen, Grande Terre, but it is expected to be more widespread as there is apparently suitable habitat. It occurs at elevations above 900 m. The extent of occurrence is approximately 4 km², and the area of occupancy is estimated to be 1 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 900

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species. There may have been a localised loss of habitat associated with the construction of the road to the summit in the past, but this is not expected to have significantly affected the area of occupancy or population size.

# Habitats and Ecology

This species inhabits closed montane forest. It is cryptozoic, semi-fossorial; terrestrial. It shelters beneath logs and stones, and forages through leaf litter.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The only immediate threats to *Nannoscincus rankini* appear to be a low to moderate risk of habitat degradation by ungulates, particularly by pigs disturbing the litter layer and cover, and possibly predation by rodents.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in Réserve de Nature Sauvage du Massif de l'Aoupinié. No specific conservation management is currently being undertaken.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Sadlier, R.A., Bauer, A.M. and Whitaker, A.H. 2002. The scincid lizard genus *Nannoscincus* Günther from New Caledonia in the southwest Pacific: a review of the morphology and distribution of species in the *Nannoscincus mariei* species group, including the description of three new species from the Province Nord. *Zoologia Neocaledonica 5, Mémoires du Muséum national d'Histoire naturelle* 187: 233-255.

DRAFT

# *Phoboscincus garnieri - (Bavay, 1869)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Phoboscincus - garnieri

**Common Names:** Scinque Géant de Garnier (French), Garnier's Giant Skink (English)
**Synonyms:** Eumeces garnieri Bavay, 1869 ; Riopa garnieri (Bavay, 1869) ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| LC - Least Concern, (IUCN version 3.1) |

### Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

### Assessment Rationale

This species is listed as Least Concern because it is extremely widespread and is able to occupy a wide range of disturbed and modified habitats. In addition, it is present in many protected areas.

## Distribution

### Geographic Range

This species is endemic to New Caledonia. It occurs throughout Grande Terre and is also present on the Iles Belep (Ile Art), Ile Yandé, Ile des Pins and nearby islands, and on the Iles Loyauté (Maré, Lifou, Ouvéa). It occurs at elevations up to at least 1,000 m. The extent of occurrence is approximately 18,500 km² (calculated from the area of all islands), and the area of occupancy is estimated to be < 18,500 km².

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

This is an extremely elusive skink that is encountered only infrequently, meaning there is no information on population size and trends. It is presumed to have undergone a significant loss of natural habitat as a result of the past widespread clearance for agriculture and mining and as a consequence of wildfires, but the effect may have been partly offset by this species' ability to occupy modified habitats with dense ground vegetation (e.g. savanna woodlands, subsistence gardens).

# Habitats and Ecology

This species inhabits a very wide range of open and wooded habitats, including supralittoral vegetation, savanna, sclerophyll forest, closed humid forest and montane forest margins, and maquis shrublands. Also present in modified landscapes such as farmland and gardens. It is diurnal, terrestrial and is active in sunlight. It shelters beneath stones and logs, and holes in the ground; secretive and generally forages within dense ground vegetation or stick litter.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Artificial/Terrestrial -> Artificial/Terrestrial - Pastureland | Marginal | - |

| | | |
|---|---|---|
| Artificial/Terrestrial -> Artificial/Terrestrial - Rural Gardens | Marginal | - |
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Savanna -> Savanna - Moist | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

*Phoboscincus garnieri* is threatened by further loss and degradation of habitats through clearance for agriculture and afforestation—and to a lesser extent by mining and wildfires—particularly when these result in highly simplified vegetation (e.g. exotic pasture). There is a potentially significant threat from the invasive ant *Wasmannia auropunctatus* at low to mid-elevations as it is known to decimate lizard populations. Predation by introduced mammals (rodents, cats, dogs and pigs) is an ever-present risk.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in most reserves throughout New Caledonia. No specific conservation management is currently being undertaken.

## Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

**Common Names:** Deplanche's Shiny Skink (English), Scinque Brilliant de Deplanche (French)
**Synonyms:** Leiolopisma deplanchei (Bavay, 1869) ; Lygosoma deplanchei Bavay, 1869 ;

**Taxonomic Note:**
As presently defined *Sigaloseps deplanchei* displays considerable morphometric variation and a low level of genetic variation across its range. This clear sub-structuring indicates it may comprise a cryptic species complex.

# Red List Assessment

| Red List Status |
| --- |
| NT - Near Threatened, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

Although the extent of occurrence and area of occupancy fall within the thresholds for the threat categories, *Sigaloseps deplanchei* is known from many more than 10 localities and is locally abundant, and at present can be regarded as secure. However, the population is highly fragmented and faces a number of threats and there is clear evidence of sub-structuring. Hence, it is listed as Near Threatened. If subsequent investigations show two or more taxa are involved, the status will need reviewing.

# Distribution

## Geographic Range

This species is endemic to New Caledonia. It is widespread in the southern part of Grande Terre. The northernmost record is from Mount Menazi, west of Kouaoua, but this is an outlying locality > 40 km northwest of the nearest location at Haut Nakéty. It occurs at elevations of up to 1,000 m. The extent of occurrence is approximately 3,500 km², and the area of occupancy is estimated to be < 1,000 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species, but it can occur at very high population densities in favourable habitats. It is presumed to have suffered a substantial reduction in area of occupancy as a result of the past widespread clearance of closed forest habitat for settlement, agriculture, afforestation and mining. Substantial areas of habitat have also been lost as a consequence of repeated wildfires. These impacts are ongoing.

# Habitats and Ecology

This species inhabits closed forests at all elevations, tall woody maquis (maquis paraforestier) and maquis wetlands. It is diurno-nocturnal, cryptozoic; terrestrial. It shelters beneath logs, rocks and deep leaf litter, and in soil crevices. It forages in cover or through leaf-litter.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The greatest threat to *Sigaloseps deplanchei* is further loss, fragmentation and degradation of closed forest habitat. The likely cause of this varies across the species' range and with elevation but includes clearance for agriculture, mining, logging and afforestation, and damage from wildfires to forest margins. These impacts will be greatest on isolated forest remnants and are expected to lead to local extirpation at some sites. This is a particularly serious threat in the Grand Sud where the nickel mining industry is expanding rapidly and there is extensive afforestation. Habitat quality is threatened by introduced ungulates (deer and pigs), particularly through damage and disruption to the litter layer and cover (such as rocks and logs). In low to mid-elevation forests the introduced ant *Wasmannia auropunctata* is expected to have an adverse impact. Introduced mammals (rodents, cats and pigs) are potential predators.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in Parc Provincial de la Rivière Bleue and a number of other reserves in the south including Pic Ningua, Mont Koghis, Forêt Cachée, Pic du Pin, Pic du Grand Kaori, Forêt Nord and Cap N'Dua. No active conservation management is currently being undertaken.

## Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Sadlier, R.A. and Bauer, A.M. 1999. The Scincid Lizard Genus *Sigaloseps* (Reptilia: Scincidae) from New Caledonia in the Southwest Pacific: Description of a New Species and Review of the Biology, Distribution and Morphology of *Sigaloseps deplanchei* (Bavay). *Records of the Australian Museum* 51: 83-91.

DRAFT

# *Simiscincus aurantiacus - Sadlier & Bauer, 1997*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Simiscincus - aurantiacus

**Common Names:** Orange-bellied Burrowing Skink (English), Scinque Fouisseur à Ventre Orange (French)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
| --- |
| VU - Vulnerable, B1ab(i,ii,iii,iv) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
| --- | --- | --- | --- | --- |
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Simiscincus aurantiacus* is found at six localised sites across four locations. Apart from Parc Provincial de la Rivière Bleue, the species is present in three small reserves, all of which are impacted by development and mining in surrounding areas, as well as by invasive species. Most of the extent of occurrence remains unprotected. Therefore, it is listed as Vulnerable.

# Distribution

## Geographic Range

This species is endemic to Province Sud, New Caledonia. It is known from six sites across southern Grande Terre, probably representing at least four locations (Rivière Bleue, Mt Koghis, Pic du Pins, Goro Plateau). It occurs at elevations between 150 m and 500 m. The extent of occurrence is approximately 840 km² (calculated from range map).

## Elevation / Depth / Depth Zones

**Elevation Lower Limit (in metres above sea level):** 150

**Elevation Upper Limit (in metres above sea level):** 500

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There are no quantitative data on population size and trends for this species. However, it is expected to have undergone a reduction in area of occupancy and total population size as a consequence of the widespread loss of closed forest and canopied maquis habitat that has resulted from the recurrent wildfires in the adjacent maquis shrublands. Some areas of habitat may also have been lost to mining and logging. These impacts are ongoing. This species is rare (or very elusive) at all the localities it has been found.

# Habitats and Ecology

This species inhabits low to mid-elevation closed humid forests and maquis para- and pre-forest. Its activity period is unknown (possibly nocturnal), cryptozoic; terrestrial. It shelters beneath logs, rocks and deep leaf litter, and in soil crevices. It usually forages in cover or in the open in low-light situations.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

The most serious threat to *Simiscincus aurantiacus* is the further loss and fragmentation of habitat from the clearance of closed forests and canopied maquis. This risk is greatest for the population on the Goro Plateau which is directly threatened by the construction of a very large opencast mine. However, the two populations in reserved forest remnants on the nearby Monts Néngoné Range are at risk of degradation from the proximity of the mine development, particularly that in the Forêt Nord reserve as it immediately adjoins the coal-fired nickel smelter. Wildfires in maquis shrublands are also a threat to forest margins. Elsewhere in the Grand Sud closed forest habitats are under threat from afforestation. Introduced ungulates (deer and pigs) threaten habitat quality, particularly by damaging the litter layer and disrupting cover (such as rocks and logs) and through opening the forest and lowering humidity. The introduced ants *Wasmannia auropunctata* and *Anoplolepis gracilipes*, which are both present in the Grand Sud, are expected to have an adverse impact. Introduced mammals (rodents and pigs) are potential predators.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in Parc Provincial de la Rivière Bleue, three reserves (Forêt Nord, Pic du Pins, Pic du Grande Kaori) and one classified forest (Mont Koghis). No active conservation management is being undertaken.

## Bibliography


Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Sadlier, R.A. and Bauer, A.M. 1997. A new genus and species of lizard (Reptilia: Scincidae) from New Caledonia, southwest Pacific. *Pacific science* 51: 91-96.


DRAFT

# *Tropidoscincus aubrianus - Bocage, 1873*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Tropidoscincus - aubrianus

**Common Names:** Aubrey's Whiptailed Skink (English), Scinque à Queue en Fouet d'Aubrey (French)
**Synonyms:** No Synonyms

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| VU - Vulnerable, B1ab(i,ii,iii)+2ab(i,ii,iii) (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

*Tropidoscincus aubrianus* is listed as Vulnerable because it has a restricted range, is found at fewer than ten locations and there is continuing decline in the extent and quality of its habitat. This species has not been observed on Grande Terre for more than 30 years. With all known sites below 300 m, it is expected that it has suffered from extensive habitat loss and it remains at risk to all threatening processes.

# Distribution

## Geographic Range

This species is endemic to New Caledonia. It is known from five widely scattered locations on Grande Terre (between Puébo in the north and Houaïlou and Moindou in the south), and from Ile des Pins. It occurs at elevations of up to 300 m. There have been no records of this species on Grande Terre for over 30 years. The extent of occurrence is approximately 4,500 km² in Grande Terre and 152 km² in Ile des Pins. The area of occupancy is estimated to be < 300 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 300

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

There is no information on population size and trends for *Tropidoscincus aubrianus*. It has unquestionably undergone a reduction in the area of occupancy as a result of past clearance of lowland forest and shrubland habitats for agriculture and from widespread wildfires, and this may have resulted in fragmentation of the population.

# Habitats and Ecology

This species occurs in supralittoral vegetation, and lowland woodlands and savanna. On Ile des Pins it has been observed in maquis shrubland. It is diurnal, terrestrial and is active in sunlight. It shelters beneath logs and rocks, and rock crevices; forages in stick litter or in sunlit patches on the forest floor.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Savanna -> Savanna - Moist | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

# Threats

This species may be at risk to further loss or degradation of woodland habitat through clearance for agriculture and gardening, and damage from wildfires. Livestock and introduced ungulates (deer and pigs) are likely to degrade habitat quality. The species is also expected to be at particular risk to the invasive ant, *Wasmannia auropunctata* (Jourdan *et al*. 2000, 2001). Predation by introduced mammals (rodents and cats) is potentially an issue.

# Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is not present in any reserves and no conservation management is currently being undertaken.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

DRAFT

# *Tropidoscincus variabilis - (Bavay, 1869)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - SCINCIDAE - Tropidoscincus - variabilis

**Common Names:** Southern Whiptailed Skink (English), Scinque à Queue en Fouet du Sud (French)
**Synonyms:** Leiolopisma variabile (Bavay, 1869) ; Tropidolopisma variabilis Bavay, 1869 ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| LC - Least Concern, (IUCN version 3.1) |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

Although the extent of occurrence and area of occupancy fall within the thresholds for the threat categories, *Tropidoscincus variabilis* remains very widespread within its range and is locally numerous. Hence, it is listed as Least Concern.

## Distribution

## Geographic Range

This species is endemic to Province Sud, New Caledonia. It is widespread in the southern part of Grande Terre (northernmost localities are Mount Vulcain and Rivière Ngoi). It occurs at elevations of up to 1,000 m. The extent of occurrence is approximately 2,400 km², and the area of occupancy is estimated to be < 1,500 km².

[Extent of occurrence was based on a crude measure of overall length times width of the most distant known locations (a rough measure of the line around the points), except for very widespread species where the published areas of the islands were taken. Area of occupancy is a contraction of that rough estimate for extent of occurrence based on where habitat remains.]

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 1,000

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

Past loss and degradation of forest and maquis shrubland habitats by wildfires is expected to have reduced population size and extent and led to fragmentation. There have also been some habitat loss from clearance for mining and logging. However, although there are no detailed data on population size and trends for *Tropidoscincus variabilis*, this species is able to occupy disturbed habitats and is still relatively abundant at some sites.

# Habitats and Ecology

This species inhabits a wide range of habitats including coastal vegetation, maquis shrublands at all elevations, closed forests and montane forests. It is diurnal, terrestrial and is active in sunlight. It shelters beneath logs and rocks, and rock crevices; forages in the open or in sunlit patches on the forest floor.

## IUCN Habitats Classification Scheme

| Habitat | Suitability | Major Importance? |
|---|---|---|

| | | |
|---|---|---|
| Forest -> Forest - Subtropical/Tropical Moist Lowland | Suitable | - |
| Forest -> Forest - Subtropical/Tropical Moist Montane | Suitable | - |
| Shrubland -> Shrubland - Subtropical/Tropical Moist | Suitable | - |

## Systems

**System:** Terrestrial

## Threats

The primary threat to this species is the further loss or degradation of habitat, particularly from wildfires in maquis shrublands and their associated damage to forest margins, and to a lesser extent from mining (Grand Sud and Tontouta Valley) and afforestation (Grand Sud). Habitat quality is also threatened by introduced ungulates (deer and pigs). In low to mid-elevation forests the invasive ant, *Wasmannia auropunctata*, is expected to have a severe impact as it is known to decimate lizard populations (Jourdan *et al.* 2000, 2001) and in the maquis in the Grand Sud another invasive ant, *Anoplolepis gracilipes*, may be just as damaging. Predation by introduced mammals (rodents and cats) is an issue.

## Conservation

This species is protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008) and in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009). It is present in Parc Provincial de la Rivière Bleue and a number of other reserves in the south including Mount Humboldt, Mount Mou, Mount Koghis and Forêt Cachée. No active conservation management is currently being undertaken.

## Bibliography

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2000. Premières observations sur les conséquences de l'invasion de *Wasmannia auropunctata* 1863 (Roger) sur les prédateurs supérieurs dans les écosystèmes Néo-calédoniens. *Actes des collectes insectes sociaux* 13: 121-126.

Jourdan, H., Sadlier, R.A. and Bauer, A.M. 2001. Little Fire Ant Invasion (*Wasmannia auropunctata*) as a Threat to New Caledonian Lizards: Evidences from a Sclerophyll Forest (Hymenoptera: Formicidae). *Sociobiology* 38(3A): 283-301.

Shea, G., Jourdan, H., Sadlier, R. and Bauer, A. 2009. Natural history of the New Caledonian whiptailed skink *Tropidoscincus variabilis* (Bavay, 1869) (Squamata: Scincidae). *Amphibia-Reptilia* 30: 207-220.

DRAFT

# *Ramphotyphlops willeyi - (Boulenger in Willey, 1900)*

ANIMALIA - CHORDATA - REPTILIA - SQUAMATA - TYPHLOPIDAE - Ramphotyphlops - willeyi

**Common Names:** Serpent-aveugle des Loyauté (French), Loyalty Islands Blind Snake (English)
**Synonyms:** Typhlops willeyi Boulenger in Willey, 1900 ; Typhlina willeyi (Boulenger in Willey, 1900) ;

**Taxonomic Note:**

## Red List Assessment

| Red List Status |
|---|
| DD - Data Deficient, (IUCN version 3.1)<br><br>DD Reason: |

## Assessment Information

| Reviewed? | Date of Evaluation: | Status: | Reasons for Rejection: | Improvements Needed: |
|---|---|---|---|---|
| False | - | - | - | - |

**Assessor(s):** Whitaker, A.H. & Sadlier, R.A.

**Reviewer(s):** Tognelli, M. & Cox, N.A.

## Assessment Rationale

The species is known from only three specimens, from at least two localities, and has not been seen since 1939. There is no information on its biology, ecology or habitat, nor on the current status or extent of the population and what threats the species might be facing. The lack of recent records may reflect inadequate search efforts or methods. Therefore, it is listed as Data Deficient.

## Distribution

## Geographic Range

This species is endemic to Province des Iles, New Caledonia. It has been recorded only from Lifou and Maré islands. It is known from only three specimens. Only one of the three specimens has a named locality—the village of Netché, on Maré. Although this village is close (<500 m) to the coast and backed by slopes with closed littoral forest, it is the place where Sarasin and Roux stayed during their expedition and there is no clear indication that it is exactly where the specimen was collected (Roux 1913). It occurs at elevations of up to 150 m. The extent of occurrence is approximately 1,848 km² (estimated from the area of the islands), and the area of occupancy is estimated to be < 1,848 km².

## Elevation / Depth / Depth Zones

**Elevation Upper Limit (in metres above sea level):** 150

## Map Status

**Map Status:** Done

## Biogeographic Realms

**Biogeographic Realm:** Australasian

# Occurrence

## Countries of Occurrence

| Country | Presence | Origin | Formerly Bred | Seasonality |
|---|---|---|---|---|
| New Caledonia | Extant | Native | - | Resident |

# Population

Nothing is known of population size or trends. May have suffered a population decline and/or reduction in extent through the removal of natural forest cover.

# Habitats and Ecology

This species is presumed to be fossorial. Nothing is known of the species' habitat, biology or ecology.

## Systems

**System:** Terrestrial

# Threats

There is no data on threats to this species. It is potentially at risk to forest clearance leading to removal of habitat or soil desiccation and to competition from the recently introduced *Ramphotyphlops braminus*.

# Conservation

This species is protected in Province Sud under Code de l'environnement de la Province Sud (Délibération No. 25-2009/APS, 20 March 2009) but not protected in Province Nord under Code de l'environnement de la Province Nord (Délibération No. 306-2008/APN, 24 October 2008). It is not present in any reserves and there is no specific conservation management for this species.

# Bibliography

Bauer, A.M. and Sadlier, R.A. 1997. The terrestrial herpetofauna of the Loyalty Islands. *Pacific Science* 51: 76-90.

Bauer, A.M. and Sadlier, R.A. 2000. *The Herpetofauna of New Caledonia*. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

Roux, J. 1913. Les reptiles de la Nouvelle Calédonie et des Iles Loyalty. Appendice: Note sur quelques reptiles des Nouvelles-Hébrides, des Iles Banks et Santa-Cruz. In: Sarasin, F. and Roux, J. (eds), *Nova Caledonia, Zoologie Volume 1*, pp. 79–160. Kreidels, Wiesbaden.

Shea, G. and Wallach, V. 2000. Re-examination of an anomalous distribution: resurrection of *Ramphotyphlops becki* (Serpentes: Typhlopidae). *Pacific Science* 54: 70-74.