

A REVISION of the AUSTRALASIAN PYTHONS

By
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Hoser*



At the time this paper was written in late 1999, there are some commonly recognised races and subspecies that remain unnamed. The purpose of this paper is to systematically list all the pythons of Australasia and assign names to those forms which though well-known to herpetologists and private reptile-keepers, do not yet have formal names. This paper also assigns some species to new genera. Diagnostic information that can be readily taken from the sources cited at the end of this paper is not necessarily repeated here.

INTRODUCTION

The pythons of Australia and New Guinea are of interest to most herpetologists. In spite of this great interest, there has been some uncertainty as to the taxonomic relationships between the various forms. Differing taxonomic arrangements have been proposed by many authors including: Cogger (1983), Kluge (1993), Underwood and Stimson (1990) and Wells and Wellington (1985). Names that have been made synonymous with those in current usage are listed by Cogger (1983) and McDowell (1975). This excludes those names used since by Wells and Wellington (1983, 1985a) and the authors who have in turn adopted those names.

For the purposes of maintaining genetically 'pure' bloodlines of snakes from the same region and/or race, it is important that unnamed forms be appropriately named and recognised. This is so that herpetologists and keepers can maintain viable captive populations that may be able to be released back into the wild at some future date should the need arise, without the potential of contaminating wild populations with

genetic stock from an inappropriate region or even species.

These are just some of the reasons why it is prudent to assign appropriate names to the various pythons sooner rather than later. From a conservation standpoint, this is particularly important at the present time as deforestation within the region remains at historically high levels and introduced feral pests continue to spread and cause declines of native species in their wake. Local extinctions of species in the region are likely in the new millennium.

PREAMBLE

There has been a substantial amount of literature detailing breeding activity in both wild and captive Australasian pythons. This includes Banks (1974, 1980), Barker and Barker (1994a), Barnett (1979, 1987, 1993, 1999), Chiras (1982), Covacevich and Limpus (1973), Dunn (1979), Fearn (1996), Heijden (1988), Hoser (1980, 1981, 1989, 1990, 1992, 1993a, 1995), Kend (1992, 1997), Kend and Kend (1992), Kluge (1993), Krauss (1995), Mavromichalis and Bloem (1994), McLain (1980), Rooyendijk (1999), Ross (1973, 1978), Ross and Marzec (1990), Sheargold (1979), Williams (1992), J.W. (year unknown) and references cited within the publications listed above.

There have also been documented cases of hybridisation between Australasian python species and subspecies, including by Hoser (1989, 1991, 1993a, 1999a) and Kortlang (1987) and references therein. A number of breedings of pythons by zoos and other institutions are documented by Frank and Kate Slavens on their internet website and it is perhaps the most comprehensive and readily available source of these details as of the time of writing this paper. The internet address is: www.halcyon.com/slavens/bsnakea.html

A number of different taxonomic arrangements for Australasian pythons have been proposed and/or used by a number of authors in recent, and not-so-recent, times, including Barker and Barker (1994a), Cogger (1983, 1986, 1992), Comber (1999), Ehmann (1992), Gow (1977, 1981, 1989), Greer (1993) Hoser (1981a, 1981b, 1981c, 1982, 1988, 1989, 1993a), Irvine (1976), Kinghorn (1956), Kluge (1993), Martin (1973), Mattison (1980), McDowell (1975), Mirtschin and Davis (1992), Murdoch (1999), O'Shea (1996), Schwaner and Dessauer (1981), Smith (1981a, 1981b, 1985), Stull (1932, 1935), Underwood and Stimson (1990),

Waite (1935), Weigel (1988), Wilson and Knowles (1988), Wells and Wellington (1983, 1985a), Worrell (1951, 1970) and references therein. The paper Wells and Wellington (1985b) does not discuss pythons and is therefore not relevant here.

The trade in these snakes is discussed in detail by Hoser (1993b and 1996).

GENUS ASPIDITES PETERS 1876

Aspidites is a genus of large terrestrial pythons endemic to continental Australia. These pythons are readily distinguished from all other Australian species by the absence of pits on the labial or rostral scales. Other diagnostic traits are the absence of teeth on the premaxilla and enlarged symmetrical shields on the top of the head. Prior to now, most authorities have divided the genus into two well-defined species. These are the Black-headed Python (*Aspidites melanocephalus*) and the Woma (*A. ramsayi*).

The former is separated from the latter by its distinct glossy black head. At best the latter only has black markings on the head.

Few authors recognise subspecies or races. Those that have subdivided the above species into races or regional variants, include Barker and Barker (1994a) and Wells and Wellington (1985a). The former recognised different races without naming them, while the latter recognised *A. collaris* as described by Longman in 1913 (see below).

Taxonomy of this genus has gained greater interest in recent years with the introduction of more formalised reptile-keeper licensing systems in most Australian states combined with the high prices of specimens traded. Authorities in

Back-headed Python
Aspidites melanocephalus
Captive US specimen.



Kevin & Sue Hanley



Kevin & Sue Hanley

Woma
Aspidites ramsayi
Captive US specimen.

some states have taken a strong stand against hybridisation of races of snakes, a view shared by a substantial number of private keepers. Noting that distinct differences between races of *Aspidites* are well known and acknowledged and that for many years a substantial number of herpetologists have recognised different races as being at least different subspecies, it is somewhat surprising that up until now no one has put names to these different races.

Black-headed Pythons and Womas are known to occur sympatrically in parts of Western Australia, with this author catching both species on the western edge of the Great Sandy Desert, north of Port Hedland, WA. (refer to photos published in Hoser 1989). There is presently no evidence of cross-breeding between the two species either in the wild or captivity. Smith (1981) also found similar sympatry between both species in Western Australia. Worrell (1963) recorded sympatry between both species in the Northern Territory. To date no similar sympatry has been recorded in Queensland. That sympatry occurs between the two species of *Aspidites* is not altogether surprising as their habitat preferences are somewhat generalist, with the snakes being found in a variety of habitat, soil and vegetation types.

Biological information about *Aspidites* is provided by Cogger (1996), Barker and Barker (1994a), Hoser (1981, 1989), Sonneman (1999) Storr, Smith and Johnstone (1986), Worrell (1970) and others. Excellent photos of *Aspidites* are provided by the authors named immediately above. Photos of habitats inhabited by *Aspidites* are provided by a number of authors including Hoser (1989) and Barker and Barker (1994a). Barker and Barker (1994a) provide an excellent bibliography of cited references on *Aspidites* and pythons in general including cases of captive breeding, breeding data and other useful material.

Type material for all species listed below has not necessarily been inspected by this author, however this author has inspected a substantial number of specimens including examples from the type localities given.

SPECIES AND SUBSPECIES OF *ASPIDITES* NOW RECOGNISED

- Aspidites melanocephalus* (Krefft, 1864)
- Aspidites melanocephalus adelynsensis* subsp. nov. (this paper)
- Aspidites melanocephalus daviei* subsp. nov. (this paper)
- Aspidites ramsayi* (Macleay, 1882)
- Aspidites ramsayi panoptes* subsp. nov. (this paper)
- Aspidites ramsayi richardjonesii* subsp. nov. (this paper)

Total of 2 species comprising six subspecies.

Aspidites melanocephalus (Krefft, 1864)

Type locality is Port Dennison (Bowen) in North-east Queensland. The holotype is held in the British Museum of Natural History (UK). *Aspidites melanocephalus melanocephalus*, the nominate subspecies, is herein restricted to Queensland and most parts of the top third of the Northern Territory. Most Black-headed Pythons in captivity are of this form.

part of the western flank of the Great Sandy Desert where it meets the WA coast. There are no unusually light specimens of *A. m. adelynsensis* known (as occurs in *A. m. daviei*). Analysis of the mitochondrial DNA of *A. m. adelynsensis* should further ascertain the differences between this and the other Black-headed Pythons, in particular, how much genetic interaction has occurred between this population and those to the east.

Black-headed python *Aspidites melanocephalus* from near Darwin.



ASPIDITES MELANOCEPHALUS *ADELYNSENSIS* SUBSP. NOV.

HOLOTYPE: A specimen at the Western Australian Museum, number 51208 from Wyndham, WA Lat: 15° 28' Long:128° 06'

PARATYPE: A specimen at the Western Australian Museum, number 17115 from 8 km south of Wyndham, WA. Lat: 15° 28' Long:128° 07'

DIAGNOSIS: Known only from Kimberley region of WA, this population of Black-headed Pythons appears to be isolated from the population to the south in the Pilbara. It is uncertain as to how much gene flow occurs between this population and that to the east in the adjacent parts of WA and the NT.

Aspidites melanocephalus adelynsensis like *A. m. daviei* (see below) is separated from other Black-headed Pythons by usually having one loreal, no suboculars and a single pair of large parietals, while most NT and Queensland Black-headed Pythons have 2-4 loreals, 1-2 suboculars and 2-4 pairs of parietals. *A. m. adelynsensis* is separated from *A. m. daviei* by distribution, being separated by

ETYMOLOGY: Named after Adelyn Hoser, the author's daughter.

ASPIDITES MELANOCEPHALUS *DAVIEI* SUBSP. NOV.

HOLOTYPE: A specimen at the Western Australian Museum, number 46170 from Tom Price WA Lat:22° 39' Long:117° 40'.

PARATYPE: A specimen at the Western Australian Museum, number 12268 from near Port Hedland, WA. Lat: 20° 19' Long: 118° 34'.

DIAGNOSIS: Known only from the Pilbara region of WA, this population of Black-headed Pythons appears to be isolated from the population to the north in the Kimberley Ranges. Some but not all specimens of *A. m. daviei* are of a distinctly lighter than usual ground colour. However this is not a general diagnostic characteristic on its own. This author has caught both lighter and more 'normal' coloured specimens in the Goldsworthy/Shay Gap areas of WA. In the northern part of the Pilbara region, the Black-headed Pythons seem to be more common in the hillier areas, while the

Womas appear to be found more in the sand-dune habitats.

Aspidites melanocephalus davieii, like *A. m. adelynsensis* (see above), is separated from other Black-headed Pythons by usually having one loreal, no suboculars and a single pair of large parietals, while most NT and Queensland Black-headed Pythons have 2-4 loreals, 1-2 suboculars and 2-4 pairs of parietals. *A. m. davieii* is separated from *A. m. adelynsensis* by distribution, being separated by part of

Black-headed python
Aspidites melanocephalus
from Goldsworthy, WA.



the western flank of the Great Sandy Desert where it meets the WA coast. These same differences were identified by Barker and Barker (1994a). Analysis of the mitochondrial DNA of *A. m. davieii* should further ascertain the differences between this and the other Black-headed Pythons.

ETYMOLOGY: Named after Neil Davie, founder of the Victorian Association of Amateur Herpetologists (VAAH) for services to herpetology.

***Aspidites ramsayi* Macleay, 1882**

The type locality is Fort Bourke in NSW. The snake later described by Longman in 1913 as *Aspidites collaris* from near Cunnamulla, Queensland, is believed to be of the same race as the nominate form and is treated here as synonymous. The distance between Bourke and Cunnamulla is not substantial. Habitats, including soils and vegetation regimes and herpetofaunas in the two areas are essentially similar.

Thus the type form of Woma is in fact the Eastern Australian form. It is distinctly more grey in dorsal colour (as opposed to

yellowish brown) than the western subspecies and has far more prominent dark markings over the eyes as compared to more western specimens which may or may not have such markings. While distributional information for Womas in Australia is patchy, partly in reflection of the relatively remote areas that they occur in, most herpetologists believe that it is not continuous throughout the arid parts of Australia.

For the purposes of this paper, and until information to the contrary is received, the nominate subspecies, *Aspidites ramsayi ramsayi* is herein restricted to inland parts of NSW and Queensland.

29'.

PARATYPE: A specimen at the Western Australian Museum, number 17662 from Merredin, WA. Lat: 31° 31' Long: 118° 14'

DIAGNOSIS: This race of Womas has a lower average ventral and subcaudal count than the main race (Barker and Barker 1984). Unlike the nominate form, *A. r. panoptes* does not usually retain the juvenile darkening over the eyes in adults. This latter trait is a trait shared with *A. r. richardjonesii*, also of WA, (see below).

This is the south-western Woma. It is separated from all other Womas by distribution (Smith 1981). The population is believed to be isolated from the main centralian population by a belt of heavy soils between Karalee and Zanthus, WA (Smith, 1981). In the absence of evidence to the contrary, this author accepts Smith's proposition.

This south-western population appears to be in terminal decline (Brian Bush, pers. comm.). The probable causes include introduced predators such as foxes and cats, habitat destruction and perhaps other unknown causes.

ETYMOLOGY: The subspecies was named *panoptes* due to popularity of the scientific name for a species of monitor

Woma *Aspidites ramsayi* (juvenile)
From Charleville, Queensland.



ASPIDITES RAMSAYI PANOPTES
SUBSP. NOV.

HOLOTYPE: A specimen at the Western Australian Museum, number 43459 from Burracoppin, WA Lat: 31° 24' Long: 118°

lizard among some Australians. Therefore I have bowed to their wishes and legitimately named another reptile by this name. ICZN rules allow species from different family and genus to carry the same species name.



Woma
Aspidites ramsayi
from Tea Tree, NT.

individual authors.

For the purposes of this paper, I will take the potentially unpopular step of identifying the said species as *saxacola*. Refer to Aplin (1999), Hoser (1999d) and Wells and Wellington (1999) for details about the timing of publication of the descriptions of *saxacola* and *stimsoni*, and details as to why the names remain in dispute. Refer to Hoser (1993a, 1999b) and references therein for details of these snakes. Breeding these snakes in captivity is detailed by Barnett, (1979, 1987 and 1999) and others.

Ant-hill Pythons (*A. perthensis*) are discussed at length by Hoser (1992, 1995 and 1999c). A further paper on breeding this relatively little-known species in captivity is that by Maryan and George (1998). A breeding record previously unreported by this author is one by the Perth Zoo in 1995. They reported hatching two eggs. Browne-Cooper (1998) and Hoser (1999c) discuss feeding in wild *A. perthensis*.

SPECIES AND SUBSPECIES OF ANTARESIA NOW RECOGNISED

- Antaresia childreni* (Gray, 1842)
 - Antaresia maculosus* (Peters, 1873)
 - Antaresia perthensis* (Stull, 1932)
 - Antaresia saxacola* (Wells and Wellington 1985)
 - Antaresia saxacola campbelli* subsp. nov. (this paper)
 - Antaresia saxacola stimsoni* (Smith 1985)
- Total of 4 species, three subspecies (of one).

***Antaresia childreni* (Gray, 1842)**

Type locality is not known, but presumed to be somewhere in tropical northern

Children's python
Antaresia childreni
from Kunnanurra, WA.

ASPIDITES RAMSAYI ***RICHARDJONESII* SUBSP. NOV.**

HOLOTYPE: A specimen at the Western Australian Museum, number 34070 from near Port Hedland, WA Lat: 20° 19' Long: 118° 34'.

DIAGNOSIS: Unlike *A. r. ramsayi*, this form usually loses the juvenile pattern around the eyes at maturity. This is diagnostic for the subspecies. While this trait is also diagnostic for *A. r. panoptes* (see description above), the two forms are separated by a vast distance, including most of the Pilbara region. *A. r. richardjonesii* is also separated from *A. r. ramsayi* by distribution.

To date this form is only known from the Western edge of the Great Sandy Desert in WA. While Centralian populations appear to have characteristics intermediate between the Easternmost and Westernmost populations, it is likely that most specimens from the NT and SA will eventually be assigned to the subspecies *richardjonesii*.

ETYMOLOGY: Named after NSW Member of Parliament, Richard Jones, for his ongoing contributions towards wildlife conservation, integrity in government and other matters. An honest and decent parliamentarian such as Richard Jones is a rare thing in Australia. That is also why he isn't with a major party.

GENUS ANTARESIA WELLS AND WELLINGTON 1985

The genus name *Antaresia* was proposed by Wells and Wellington. It appears to have been accepted by most authors since 1991 without dispute. The genus encompasses the smaller Australasian pythons, formerly lumped in the genus *Liasis*, and occasionally referred to as

Bothrochilus. (*Bothrochilus* is now usually only applied to the species 'boa'). Etymology for the name *Antaresia* comes from Antares, the yellow giant star in the 'tail' of the constellation of Scorpius. Incidentally, Richard Wells named his daughter Antares.

Three of the four species in this genus were formerly referred to as Children's Pythons before they were split into three species in the 1980's. These were the Children's, Stimson's (= *saxacola*) and Spotted Pythons. Wells and Wellington (1985) described one of the species as *A. saxacola*. It is regarded as the same species as *A. stimsoni*. The latter name is in fact the junior synonym of the former.

This appears to make *saxacola* the correct name to use. However, common usage at present favours *stimsoni* over *saxacola*. With regard to ICZN rules and procedures, the question is whether or not just over a decade of use qualifies the name *stimsoni* to take precedence over the proper name *saxacola*. This author does not believe it does, but until the ICZN makes a firm ruling on the matter (one way or other), the question will to some extent remain open for interpretation by



Australia. This species is the 'Children's Python' from tropical northern Australia. There are at least three different regional races, including those from the Kimberley Ranges, the hill country of the Northern Territory including around Katherine, which shares affinities with the Kimberley animals and the lowlands area near Darwin where the animals have a distinctly different appearance.

Gray published two descriptions at the same time, namely *Liasis childreni* from unknown locality (presumed to be in Queensland) (refer to Smith 1985) and *Nardoia gilberti*, later made synonymous from Port Essington in the NT. *A. childreni* is separated from others in the genus by its pattern not being bold, or if so, less than is usually seen in *A. saxacola* (except perhaps *A. saxacola campbelli* (see below) which while distinctly patterned is not as bold as other *A. saxacola*). *A. childreni* is separated from *A. perthensis* by its larger average adult size and having 37 or more mid body rows.

***Antaresia maculosus* (Peters, 1873)**

The type locality is coastal North Queensland. The type specimen is held in Germany.

This species is known as the spotted python. The species is separated from others in the genus by its pattern of distinct spots and/or blotches which may or may not join along the dorsal midline. It occurs only in coastal Queensland and nearby areas. It is also has the most even temperament of the *Antaresia* pythons with the possible exception of *A. perthensis*. The largest specimens seen by this author are from far north Queensland.

***Antaresia perthensis* (Stull, 1932)**

Type locality was erroneously given as Perth, WA. It seems that these snakes are actually confined to the Pilbara and immediately adjacent areas of WA. This is probably the smallest species of python in the world and is separated from other *Antaresia* by having less than 37 mid body rows and 250 or less ventrals. The

species usually has a distinct reddish tinge. Juveniles usually have a distinct pattern which tends to fade with age. Some adults become an even brick-red in colour.

These snakes are usually sympatric with *A. saxacola* in the wild. No hybridisation is known. Refer to Hoser (1992, 1995 and 1999c) for further details.

***Antaresia saxacola* (Wells and Wellington, 1985)**

The type locality is near Barrow Creek in the NT. It is the same species described by Smith in 1995 and called *stimsoni*. However the race from this part of the NT was called '*stimsoni orientalis*' by Smith. It is herein regarded as a junior synonym of the nominate species '*saxacola*'. This snake is separated from others in the genus by its distinct pattern of bold blotches or bars and a white ventro-lateral stripe along the anterior part of the body. The nominate subspecies, *saxacola* is believed to be restricted to central Australia and adjacent areas.

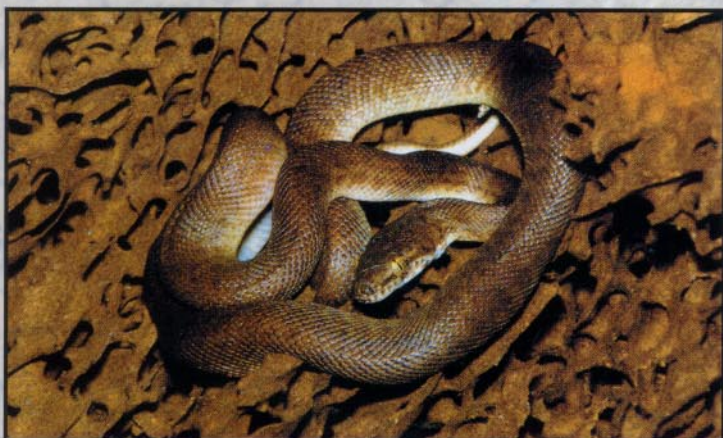


Above:
Spotted python
Antaresia maculosus from Hartley's
Creek, Queensland.

Above right:
Ant-hill python
Antaresia perthensis
from Shay Gap, Western Australia.

Centre right:
Hatchling Ant-hill python
Antaresia perthensis
parents from Shay Gap, WA.

Below right:
Snake thought to be related to Ant-
hill python.





Stimson's python
Antaresia saxacola adult from
Barrow Creek, NT.

Antaresia saxacola stimsoni
(Smith 1985)

This is the subspecies originally described by Smith in 1985 as '*Liasis stimsoni stimsoni*'. The type locality is near Nullagine in WA. This is typical habitat for the race. The habitat in the area is composed of rocky spinifex covered hills dissected by watercourses that are usually only carrying water immediately after rain. This subspecies is separated from the other two by usually having more ventrals (260-302 in *stimsoni* versus 243-284 in *saxacola*), as outlined by Smith (1985). This subspecies is also believed to be confined to Western Australia (Smith 1985).

ANTARESIA SAXACOLA CAMPBELLII
SUBSP. NOV.

HOLOTYPE: A specimen in the Australian Museum, Sydney, number R69087 from Wilcannia, NSW, Lat. 31° 34' Long. 143° 23'. Photos of this species in life can be found in Cogger (1992), page 609 from the same area (Wilcannia, NSW).

DIAGNOSIS: This subspecies occurs in Far Western NSW and the nearby parts of South Australia and also nearby parts of western Queensland. The distribution broadly parallels that of other reptiles known from the Murray-Darling Basin (and adjacent areas) including the Murray/Darling Carpet Snake, namely *Morelia metcalfei*. *A. s. campbellii* is separated from the other subspecies by distribution. *A. s. campbellii* is also distinguished from other *A. stimsoni* by its softer reddish and less contrasting colour with finer patterning. The head is also a different shape. The snout has a less box-like anterior when compared with other *A. stimsoni*.

Ehmann (1992) describes this subspecies as having a 'very robust body', but I am uncertain if this is any more so in this form than for the other subspecies. Kend (1997) also regards *A. s. campbellii* as a distinct subspecies. In line with all *A. saxacola* these snakes are usually found in rocky habitats. People in Sydney have kept this subspecies for many years without problem.

This author hereby proposes the common name 'South-eastern Rock Python' with reference to its geographical range and preferred habitat.

ETYMOLOGY: Named after the Independent Member for the Australian House of Representatives, Graeme Campbell. Like Richard Jones (see previous), Graeme Campbell was unusual among Australian politicians in that he had possessed the traits of honesty and integrity. It therefore wasn't surprising that he was forced out of the Australian Labor Party (ALP).

GENUS AUSTROLIASIS WELLS AND WELLINGTON 1983

SPECIES AND SUBSPECIES OF AUSTROLIASIS NOW RECOGNISED
Austroliasis amethystina (Schneider,

New Guinea bar-necked scrub python
Austroliasis amethystina
from Northern New Guinea.

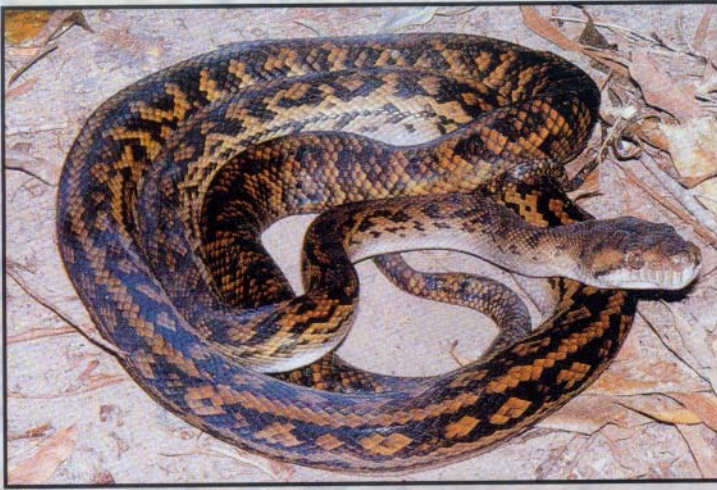


Stephen Von Peltz



Stephen Von Peltz

Indonesia scrub python
Austroliasis amethystina
from Indonesian Island.



Scrub python
Austroliasis amethystina
 from Hartley's Creek, Queensland.

Austroliasis amethystinus clarki
 (Barbour, 1914)

The type locality is the relatively isolated Murray Island in Torres Strait, which is in Australian territory and about midway between the Australian and New Guinean mainlands. Snakes from this area share the same characteristics as specimens from southern New Guinea and north-east Australia, which McDowell (1975) found to be essentially similar in most respects. Australian snakes referred to as *Austroliasis amethystinus kinghorni* (Stull, 1932) are herein referred to this subspecies as a junior synonym.

1801)
Austroliasis amethystinus clarki (Barbour, 1914)
Austroliasis timorensis (Peters, 1877)
Austroliasis spp. (yet to be formally named)

For further comments on this genus, see under *Morelia* below.

There is some doubt as to the origins of the type specimen for *Austroliasis amethystinus*. If it is of the same race as the form herein designated as *clarki* then *clarki* itself will be a junior synonym and,

Timor python *Austroliasis timorensis*
 - captive UK specimen.

Austroliasis amethystina
 (Schneider, 1801)

This is the Scrub Python of Australia and New Guinea. There are several species within this genus, all of which have previously been identified by other authors as variants of the Scrub Python (*amethystina*). For *Austroliasis amethystina* the type specimen is presumed lost. The type locality is also uncertain, but presumed to be New Guinea.

The various forms that are believed to be different species are found within the Australasian/Papuan region, including the various nearby islands. Within Australia, *Austroliasis* is confined to North-east Queensland and offshore islands. Wells and Wellington assigned the species *timorensis* to this genus. Bearing in mind that other authors have confused the two species (due to their similarities), the placement of the species in the same genus makes sense.

This author had assigned names to forms previously regarded as *A. amethystina* that are found in Islands to the north-west and south-west of New Guinea. They were, however, withdrawn from this paper after it became apparent that David Barker and others were similarly subdividing the genus *Austroliasis* as it is described here.

Ringed python *Bothrochilus boa*
 from Bismark Islands.



Frank Schofield

therefore, an invalid name. Until this is properly established, it is probably best to regard Australian and southern New Guinea specimens as being of the subspecies *clarki*.

***Austroliasis timoriensis* (Peters, 1877)**

This is a smaller species than *Austroliasis amethystina* and replaces it on the island of Timor. It is endemic to Timor. The snakes assigned to this species from the nearby Islands including Flores are not known to this author. Further investigation of these snakes is warranted.

Ross and Marzec (1990) have published further details about *A. timorensis*, including its breeding in captivity.

**GENUS *BOTHROCHILUS*
FITZINGER 1843**

The genus comprises just one species. This is *Bothrochilus boa* (The Ringed Python) known only from the Bismarck Islands, north of New Guinea. It is endemic to the region. The type locality is New Ireland. The species does not occur on the island of Mussau.

The species cannot be confused with any other Australasian species. Refer to O'Shea (1996) and references therein for further diagnostic information. Photos of the species are published in Hoser (1993b) and O'Shea (1996).

The species occurs in both banded/blotched and unbanded forms. The unmarked specimens are similar in many respects to *L. albertsii*. However the two species are separated by distribution. *B. boa* is also separated from *L. albertsii* by its smaller adult size (under 2 metres), reduced labial pit system, lower scale counts and a suite of other characters. Refer to McDowell (1975) for further details.

**GENUS *CHONDROPYTHON*
MEYER, 1874**

This is the Green Python. There is only one species within the genus, that is *Chondropython viridis*. The type locality is the Aru Islands, Indonesia, south of New Guinea.

Many recent workers have made synonymous this genus and *Morelia*, the latter name taking precedence. This author does not accept that arrangement.

**Green Tree python
*Chondropython viridis***

**Top - unknow, locality.
Centre - Sorong, Irian Jaya.
Bottom - Yapen Island, Irian Jaya.**



Stephen Von Peitz

Paul Harris

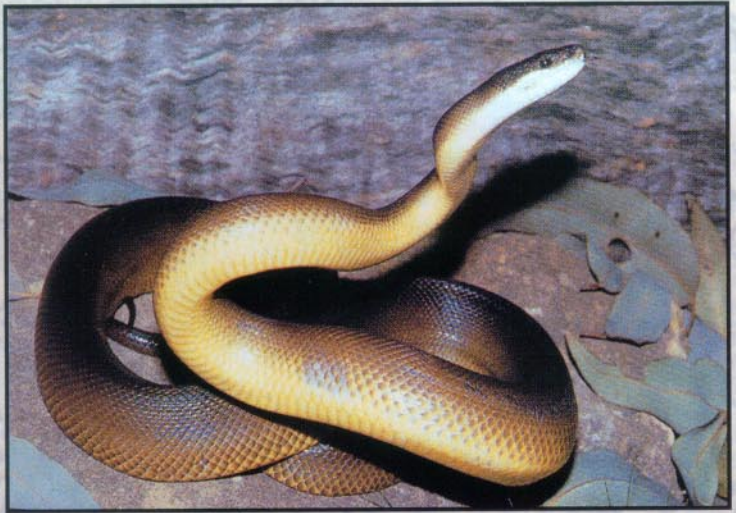
While it is clear that the two genera derived from the same ancestral stock, it is believed that the two have been separated long enough to warrant being placed in separate genera. The lack of a distinct dorsal pattern of blotches and stripes that typifies all *Morelia* (except *spilota*) or a black and yellow dorsal pattern as in *spilota* separates *Chondropython* from all snakes in *Morelia*. There are no iridescent green *Morelia*. This is the usual dorsal coloration for adult *Chondropython*.

The absence of labial pits in *Chondropython* is frequently cited as a characteristic that separates the genera *Chondropython* and *Morelia*. That is not so. In fact both genera have distinct labial pits. See the photos published in Hoser (1989) or O'Shea (1996) to view the labial pits in both genera. The Green Pythons are readily distinguished from all other Australian pythons. Refer to Hoser (1981a) McDowall (1975) and O'Shea (1996) for further diagnostic information.

Australian Green Pythons (as cited by Thomson (1935)) are more likely than the New Guinea specimens to have markings along the spine to form some sort of vertebral line or pattern. This is corroborated by other authors including the photos in Greer (1997). However, the same trait is also seen commonly in south New Guinea specimens. Specimens from the north of New Guinea are likely to have spots in a more irregular pattern.

Specimens from around the high country of Wamena in Irian Jaya are a very dark green with buttercup yellow spots on the back. The dark yellow ventral scales are commonly a grey/black in colour. As with *Morelia*, *Chondropython* is a species with considerable variation in colour, not only between locations, but even within a single location and even within a single litter of young.

Photos of Australian Green Pythons in life with exact locality data are shown in Greer (1997). Photos of New Guinea Green Pythons in life are shown by O'Shea (1996).



Top - Water python *Katrinus fuscus* from near Darwin, NT.

Centre - New Guinea water python *Katrinus fuscus cornwallisius*, captive UK specimen.

Bottom - Macklot's python *Katrinus mackloti*, captive UK specimen.

Frank Schofield

Frank Schofield

**Savu python *Katrinus savuensis*
from Savu Island.**

KATRINUS GEN. NOV.

**TYPE SPECIES: *LIASIS FUSCUS*
PETERS, 1873**

DIAGNOSIS: A group of medium to large pythons from the Austro-Papuan region, most closely related to *Liasis* and more distantly the other Australasian genera including *Morelia*. *Katrinus* is readily identified by the following suite of characters: They have large teeth on the premaxilla. The head is covered by large symmetrical shields and there are pits in some of the labial scales. *Katrinus* are separated from *Antaresia* by having a single loreal rather than two or more. *Katrinus* are separated from *Leiopython* by having two pairs of prefrontals as opposed to having a pair. *Katrinus* are separated from *Liasis* by usually having 55 or less mid-body rows (*Liasis* usually has over 60).

Katrinus are invariably associated with watercourses and are commonly known as 'Water Pythons'. Diagnostic information for the species *fuscus* is provided by Hoser (1989). Breeding information on the species is provided by Ross and Marzec (1990) and other authors. Also included in the genus *Katrinus* are the species *mackloti* and *savuensis*.

The species *fuscus* has been divided into two subspecies. The nominate form is herein restricted to continental Australia only. Snakes from New Guinea are herein transferred to the subspecies *cornwallisius* (see below).

The species *mackloti* is subdivided into the two subspecies *mackloti* and *dunni*.



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The form from Semao is also probably a subspecies of the nominate Timor race.

ETYMOLOGY: Named after Katrina Hoser, the author's mother.

***Katrinus fuscus* (Peters, 1873).**
See above.

***Katrinus fuscus cornwallisius*
(Gunther, 1879).**

This is the New Guinea form of the Water Python. The type locality is Dauan (as Cornwallis) Island, Torres Strait. The mountain on the island is called Cornwallis Peak. This Island is immediately adjacent to the low-lying Sambia Island which is in turn immediately adjacent to the southern New Guinea coast. The fauna on this Island is clearly derived from New Guinea, with which it was joined in the recent geological past. Therefore, it is also clear that the Water Pythons here are of the same stock as those specimens found on

the adjacent New Guinea mainland.

The subspecies can be separated from the mainland Australian form by its generally darker dorsal body colour (in life) and by analysis of its mitochondrial DNA.

***Katrinus mackloti*
(Dumeril and Bibron, 1844).**

For diagnostic information refer to Bulian (1994), O'Shea (1996), Stafford (1986) and references therein. The type locality is Timor. The species is found on the Lesser Sunda Islands to the West of New Guinea. These include Timor, Semao and Wetar. Semao is geographically adjacent to Timor. It is uncertain if the *K. mackloti* found there are of the same subspecies as is found on Timor. At least one other author has raised the possibility that it may be a different taxon, at least at the subspecies level.

L. mackloti is distinctly mottled in appearance as opposed to the Brown Water Pythons (*fuscus*) from mainland Australia and southern New Guinea. McDowell (1975) and Smith (1981) erroneously stated that there is no difference between *Katrinus fuscus* and *K. mackloti*. Bulian (1994) gave a series of differences between the two species. They are listed in slightly altered form below:

Body shape:

mackloti – Head clearly distinct from neck. Head medium to large and averaging about 6 cm in adults. Adult females usually up to 2.8m, males 2.5m in total length.

fuscus – Head is slightly distinct from

**Dunn's python
Katrinus mackloti dunni
from Wetar Island.**



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neck. Head is relatively small and averaging about 4 cm in adults. Adult females average up to 2m and males 1.7m in total length.

D'Albert's Python
Leiopython albertisii

***Katrinus mackloti dunnii* (Stull, 1932).**

In 1932 Stull described the subspecies '*Liasis mackloti dunnii*' from Wetar Island, just north of Timor. These snakes do appear to have minor differences from the nominate form. They are also being

sustaining numbers.

Prior to the mid 1990's the species was relatively little known to herpetoculture in the northern hemisphere. However in the last few years there have been several papers and articles published on breeding the species in captivity in popular herpetological magazines by Dave and Tracy Barker (Barker and Barker, 1994b, 1995)

GENUS *LEIOPYTHON*
HUBRECHT, 1879

Until now this genus has been monotypic, including only the species, *Leiopython albertisii* (Peters and Doria 1878). The type locality for the species is Andai and Kapaor, Irian Jaya. These specimens are substantially different from the dark bodied snakes that come from southern parts of Papua New Guinea and nearby Irian Jaya that have until now been assigned to this species. Those snakes are herein regarded as a new species, namely *Leiopython hoserae*, (see below).

Several authors have made various findings in terms of the relationship between the genus *Leiopython* and *Borthrochilus*. This author prefers the generic arrangement of these species as it appears in this paper.

SPECIES AND SUBSPECIES OF *LEIOPYTHON* NOW RECOGNISED

- Leiopython albertisii* (Gray, 1842)
 - Leiopython albertisii barkeri* subsp. nov. (this paper)
 - Leiopython albertisii bennetti* subsp. nov. (this paper)
 - Leiopython hoserae* sp. nov. (this paper)
- Total of two species, one with three subspecies.

***Leiopython albertisii* (Gray, 1842)**

The type localities are near Andai and Kapaor in Irian Jaya. This is the form with the golden brown body and black head. It is also the form most commonly seen in captivity in the northern hemisphere. Photos of *L. albertisii* in life appear in O'Shea (1996) and Ross and Marzec (1990).

***LEIOPYTHON ALBERTISII BARKERI* SUBSP. NOV.**

HOLOTYPE: A female specimen, at the Universitets Zoologiske Museum, Copenhagen (R5444) collected by the Noona Dan Expedition, from the Island of Mussau in the Saint Matthias Group, Bismarck Archipelago, Lat: 1° 30' Long: 149° 40'. Scalation is smooth with 267 ventrals and 72 subcaudals.

PARATYPE: A male specimen, at the Universitets Zoologiske Museum,



Pattern:

mackloti – Head brown, dorsum middle to dark grey with brown spots. Anterior third of the venter is yellow, the rest of the venter is greyish white.

fuscus – Dorsal and head pattern is a uniform olive brown. The venter is bright yellow to egg-yolk yellow.

Behaviour:

mackloti – Usually calm and peaceful behaviour, but there are some exceptions. Voracious feeders.

fuscus – Aggressive behaviour. The species has a reputation for biting.

traded as a distinct subspecies by Indonesian dealers. This author therefore recognises the subspecies *Katrinus mackloti dunnii*.

Katrinus savuensis
(Brongersma, 1956).

The species is currently known only from the Island of Savu (=Sawu=Sabu) Indonesia. It is separated from *mackloti* by a suite of characters including its smaller average adult size. Since the mid 1990's a sizeable number of these snakes have been imported into the USA and Europe and they are now being bred in captivity in what seem to be self-

Copenhagen (R5445) collected by the Noona Dan Expedition, from the Island of Mussau, in the Saint Matthias Group, Bismarck Archipelago, Lat: 1° 30' 149° 40'. Scalation is smooth with 271 ventrals and 73 subcaudals.

DIAGNOSIS: This is the subspecies of *L. albertisii* that is endemic to Mussau Island in the Saint Matthias Group, Bismarck Archipelago. It is separated from *L. albertisii albertisii* by the mutually exclusive distribution and by analysis of mitochondrial DNA.

Ventral counts for this species are near the lower limit for the range for New Guinea *L. albertisii*. The trait may be used as a potential indicator for the subspecies in the absence of other data. Other scalation counts and properties also overlap with those of the type subspecies.

ETYMOLOGY: Named after two people, namely David and Tracy Barker of Texas. The husband and wife team have developed one of the most sophisticated python breeding facilities in the world.

LEIOPYTHON ALBERTISII BENNETTI
SUBSP. NOV.

HOLOTYPE: A juvenile female specimen from near Wau, PNG, Lat: 7° 20' Long: 146° 40', number BBM 5452 in the Bernice P. Bishop Museum, Honolulu. The specimen was collected by A. C. Ziegler on 13 June 1967. Measurements were, snout-vent 540 mm, tail 95 mm, total length 635 mm. Scalation: Smooth with 274 ventrals and 68 subcaudals.

PARATYPES: A male specimen from near Wau, PNG, Lat: 7° 20' Long: 146° 40', number BBM 3890 in the Bernice P. Bishop Museum, Honolulu. The snake was collected by O. R. Wilkes on or around 1 May 1966 at an elevation of about 1150 metres. The snake is skinned out except for the head and tail. Scalation: 263 ventrals and 62 subcaudals.

A specimen from near Wau, PNG, Lat: 7° 20' Long: 146° 40', number BBM 5137 in the Bernice P. Bishop Museum, Honolulu. The snake was collected by H. Clissold on or around 24 August 1963 at an elevation of about 3500 feet in forest habitat. The snake is skinned out except for most of the skull. Scalation: 271 ventrals and 68 subcaudals.

DIAGNOSIS: Essentially similar in most respects to *L. albertisii albertisii* from which it can usually be differentiated by its higher loreal count. *L. albertisii albertisii* usually has a single loreal in broad contact with the prefrontal. The three specimens listed above are typical for their subspecies in that they have two or

three loreals on each side.

Specimens of *L. albertisii albertisii* usually have a single pair of elongated prefrontal scutes with their median suture three or more times as long as the suture between the internasals. However in *L. albertisii bennetti* it is not unusual for there to be a pair of small lateral prefrontals, broadly



White-lipped python
Leiopython hoserae
black phase.

separated from each other by the median prefrontals but in contact with the frontal posteriorly and with the more posterior loreal anteriorly. This is seen in specimens BBM 5452 (the holotype) and BBM 5137 (the second paratype).

In *L. albertisii albertisii* it is usual for there to be a whitish spot behind the eye. However this is often, but not always absent from specimens of *L. albertisii bennetti*.

The two forms are further separated by distribution, one being found in New Guinea around Wau and nearby areas, the other known from Irian Jaya. The exact status of the specimens from intermediate locations isn't known. *Leiopython albertisii bennetti* is separated from *Leiopython albertisii barkeri* by distribution, the latter being the only subspecies found Mussau.

ETYMOLOGY: I have once again taken the liberty of naming the subspecies after two people. This includes the UK herpetologist Daniel Bennett, who is perhaps best known for writing a series of books about Monitor lizards.

I have also named the subspecies after former NPWS/NSW Wildlife Enforcement Officer Clive Bennett (who co-incidentally shares the same name) in recognition of his voluntary conservation work with birds of prey over many years. Bennett also played an essential role in having

corruption within his department raised in the NSW Parliament, NSW ICAC and after failure by these two to investigate the evidence he presented, he passed this information to this author for inclusion in the book *Smuggled-2: Wildlife Trafficking, Crime and Corruption in Australia* which was published in 1996.

LEIOPYTHON HOSERAE SP. NOV.

HOLOTYPE: A large male specimen in the American Museum of Natural History from Wipim (=Wipam), Western District, PNG, Lat: 8° 40' Long: 142° 55', specimen number 107150. The snake has a body length of 6ft 10.5 inches and a total length of 7ft 11 inches.

DIAGNOSIS: This is the species formerly known as the black race of the White-lipped Python.

L. hoserae is separated from *L. albertisii* by the fact that its dorsal body colour is usually a greyish metallic black in adults as opposed to a golden brown colour. *L. hoserae* also attains a larger size, with this author having photographed a specimen at Melbourne Zoo of about 2.5 metres, (also refer to the type specimen above). *L. albertisii* rarely if ever attains this size. Live *L. hoserae* are shown in Hoser (1989), O'Shea (1996) and Ross and Marzec (1990). The specimens depicted in Hoser (1989) are derived from the Port Moresby area (Chris Banks, Melbourne Zoo, pers. comm).

There are numerous other characteristics that separate the two species of *Leiopython*, including DNA properties.



Bolens python *Lenhoserus boeleni*

L. hoserae cannot be confused with any other New Guinea snake. *L. hoserae* occurs in the southern areas of PNG, south of the main central range, including the area around Port Moresby, and adjacent parts of Irian Jaya around Merauke where it is understood to be relatively uncommon and/or rarely collected. It is uncertain as to how far west the distribution of this species extends. Nor is it certain if this distribution is continuous or disjunct. However, notwithstanding the previous statement about the species around Merauke, this species is like *L. albertisii* in that it is usually common where it occurs. *L. hoserae* is not as common in captivity as *L. albertisii*.

The species is understood to also occur on Islands just south of New Guinea in the Torres Strait area, that fall within Australian territory (refer to Cogger 1996)



and other sources. The species also occurs in the Aru Islands to the south, where it is understood to be reasonably common.

ETYMOLOGY: Named after the author's wife, Shireen Hoser.

LENHOSERUS GEN. NOV.

TYPE SPECIES: PYTHON BOELENI BRONGERSMA, 1953

DIAGNOSIS: A large thick-set and smooth-scaled python known only from the Island of New Guinea with one outlier population on Goodenough Island. It is presumed that these populations became split with the advent of rising temperatures and sea levels over the last 20,000 or so years. The genus is most closely related to *Chondropython* and *Morelia*. *Lenhoserus* is differentiated from both other genera by its adults having a dominantly black dorsal colour in adults, interrupted only by slight and incomplete

yellow bars coming up the sides from the ventral surface. None of the other two genera look like this. The differences are best seen by inspection of live specimens and/or viewing photos of the relevant species. *Lenhoserus* is separated from *Leiopython* by a lack of scale pits on the rear of the body. McDowell (1975) also separates the genera by hemipenal morphology.

Photos of *Lenhoserus*, *Leiopython*, *Morelia* and *Chondropython* can be seen in O'Shea (1996). Juvenile *Lenhoserus* are usually reddish in general coloration and similar in appearance to *Morelia*.

Chondropython by contrast have a yellow or red juvenile dorsal colour, and a green or blue dorsal colour in adults, while no *Morelia* are as adults an almost patternless black (see next paragraph). The *Morelia* that are almost all black (e.g. some *spilota* and some *cheynei*) lack the semi-banded pattern on the lower sides from the belly as seen in *Lenhoserus*. There are also a number of other differences between the genera. Adult *Lenhoserus* has a creamish belly.

While *Lenhoserus* can be confused with *Leiopython*, the two are easily separated by their differing head scalation and the fact that *Leiopython* has a relatively longer and more gracile head. Photos of *Lenhoserus* in life can be found in O'Shea (1996) page 79 and Ross and Marzec (1990). The latter publication also provides photos of juvenile specimens.

Lenhoserus can be definitively separated from all other pythons by genetic sequencing.

Lenhoserus is restricted to mid montane forests of New Guinea (including Irian Jaya) and Goodenough Island, from altitudes of about 1,000 metres upwards, but below the treeline. It favours humid environments and lives both on the ground and in trees.

ETYMOLOGY: Named after Len Hoser, the author's father.

Lenhoserus boeleni
(Brongersma, 1953).
See above.

GENUS LIASIS GRAY, 1840

Until now, the genus included the Olive and Water Pythons. I agreed with Wells and Wellington (1985) in viewing the name *Liasis* as being unavailable for this group. However the ICZN later used its plenary powers to assign the name *Liasis*

Olive python
Liasis olivaceus
from Pine Creek, NT.

to these snakes. Hence it is used here. The name *Bothrochilus* is herein applied to the taxon *boa* only. That snake is the Ringed Python from the Bismarck Islands to the north-east of New Guinea.

Within Australia these snakes are '*Liasis fuscus*' (Water Python) herein referred to as *Katrinus fuscus* and *Liasis olivaceus* (Olive Python). The latter species is divided into two subspecies, namely *olivaceus* (most of northern Australia, including the tropical top-end) and *barroni* (the Pilbara region of WA only). Refer to Hoser (1981c) and Smith (1981) for diagnostic information on these two species. For detailed biological and captive husbandry information, refer to Barker and Barker (1994).

Outside of Australia, members of the above group include *mackloti*, *savuensis* (assigned to the genus *Katrinus*) and



Western olive python
Liasis olivaceus barroni
From Wittenoom WA.



Papuan python *Liasis papuana*.

papuana. *K. mackloti* and *savuensis* have a close affinity with *fuscus*, with which they have been confused in the past. *L. papuana* has been confused with *olivaceus*. Kluge (1993) split off *papuana* into its own genus *Apodora*. I do not agree with this delineation and herein synonymise it with *Liasis*. However, it is my considered view that the *fuscus* group (Water Pythons) are sufficiently delineated from the *olivaceus* group (Olive Pythons), to warrant placement into their own genus.

The *fuscus* group (including *mackloti* and *savuensis*) is hereby placed into the genus *Katrinus*. Refer to the genus and species diagnoses given earlier.

SPECIES AND SUBSPECIES OF *LIASIS* NOW RECOGNISED:

Liasis olivaceus (Gray, 1842)
Liasis olivaceus barroni (Smith, 1981)
Liasis papuana (Peters and Doria, 1878)
(2 species, one species having two subspecies)

For diagnostic information relating to the Australian species refer to Smith (1981) and Hoser (1981c) and references therein. For diagnostic information relating to *papuana*, refer to McDowell (1975) and O'Shea (1996) and references therein.

In summary, however, all are so-called 'Olive pythons'. *L. olivaceus olivaceus* is found throughout tropical Australia. *L. olivaceus barroni* is restricted to the Pilbara region of WA and is a slightly larger form than *L. olivaceus olivaceus*. *L. papuana* is restricted to New Guinea. The type localities are given below.

Liasis olivaceus (Gray, 1842)

Type locality is Port Essington, NT. See above.

Liasis olivaceus barroni (Smith, 1981)

Type locality is Tambrey, WA. See above.

Liasis papuana (Peters and Doria, 1878)

Type locality is Romoi, near Soron, Irian Jaya. See above.

GENUS *MORELIA* GRAY, 1842.

As previously recognised, this genus currently includes the carpet snakes (*spilota*, *variegata*, *cheynei*, *imbricata*, *metcalfei*, *macdowellii* and *bredli*), rough-scaled (*carinata*), scrub (*amethystina*) Oenpelli (*oenpelliensis*) and Boelen's (*boeleni*) Pythons. The genus also has been expanded by some authors to include the closely related species *viridis*, (herein placed in *Chondropython*): see above. However, this author believes that the generic arrangement as proposed by Wells and Wellington (1985a) is more appropriate. They split off the Scrub and Oenpelli pythons into their own separate genera. They assigned the name *Australiasis* for the Scrub Pythons (in 1983) and *Nyctophilopython* for the Oenpelli Python (in 1985). This author suspects that the non-use of those names by later publishing herpetologists has at least as much to do with the general inertia towards the authors Wells and Wellington as the appropriate taxonomic status of these snakes.

Furthermore, while the Boelen's Python (*boeleni*) has close affinities with the carpet pythons, there is no evidence

before this author to suggest that the relationship is any closer than that between the Green (*viridis*) and carpets. Thus if *viridis* is entitled to be placed in a separate genus to the carpets, so too should *boeleni*. Therefore the species *boeleni* is herein placed in the new genus *Lenhoserus* (see genus description earlier in this paper).

While generally endorsing the Wells and Wellington position on the generic arrangement they have proposed, I acknowledge that I will become unpopular in some circles for using them here. I will no doubt be criticised for further splitting of the Australasian python genera by some herpetologists, including those who wish to call all, or most, either '*Python*' or '*Morelia*'. However, there is little doubt that some of this criticism will be a hidden form of saying 'that makes sense, but, why didn't I do this first?'.

Notwithstanding this, I believe that it is in the interests of herpetology to move beyond petty personal matters and use more appropriate names if available. In this case they are. Thus the new arrangement is as follows:

Genus *Austroliasis* includes:

Austroliasis amethystina (Schneider, 1801)

Austroliasis timorensis (Peters, 1877)

Genus *Nyctophilopython* includes:

Nyctophilopython oenpelliensis (Gow, 1977)

Genus *Lenhoserus* includes:

Lenhoserus boeleni (Brongersma, 1953)

SPECIES OF *MORELIA* NOW RECOGNISED

Morelia bredli (Gow, 1981)

Morelia carinata (Smith, 1981)

Morelia cheynei Wells and Wellington, 1983

Morelia harrisoni sp. nov. (this paper)

Morelia imbricata (Smith, 1981)

Morelia maddowelli Wells and Wellington, 1983

Morelia metcalfei Wells and Wellington, 1985

Morelia spilota (Lacepede, 1804)

Morelia variegata (Gray, 1824)

For diagnostic information on the various species described above, refer to Gow (1977, 1981), Hoser (1989), O'Shea (1996), Smith (1981), Wells and Wellington (1983, 1985a) and references therein. Cogger (1983), and Wells and

Top - Bredl's python *Morelia bredli* from Alice Springs, NT.

Centre - rough-scaled python *Morelia carinata* from Prince Frederick Harbor, WA

Bottom - jungle carpet python *Morelia cheynei*





Wellington (1983, 1985a) give type locality details for the various forms as described below except for *M. harrisoni* sp. nov. which is described in this paper.

The various *Morelia* pythons can be summarized as below:

Morelia bredli (Gow, 1981) – Centralian Carpet Python. Separated from others in the genus except *carinata* by its distinct bluish-grey eye. *M. bredli* has less *rugose* scalation than *carinata*.

Morelia carinata (Smith, 1981) – Rough-scaled python, known only from the Kimberley ranges in WA. Refer to Hoser (1991b) for further details and a photo of the species). Also see the original description by Smith (1981).

Morelia cheynei Wells and Wellington, 1983 – Jungle Carpet Python. Known from the Atherton Tableland and nearby areas of North-east Queensland. These snakes rarely exceed two and a half metres. Adults are usually slightly less than two metres. They are often characterised by contrasting yellow and black markings.

Morelia harrisoni sp. nov. (this paper) – Found in New Guinea. See below.

Morelia imbricata (Smith, 1981) – The south-west Australian population of carpet snakes. They are characterised by an imbricate pattern, hence their scientific name. They also occur on some islands off the SA coast.

Morelia maddowelli Wells and Wellington, 1983 – This is the 'Coastal Carpet' from northern NSW and south-east Queensland. This is perhaps the largest of the Carpets with specimens in excess of 3 metres fairly common.

Morelia metcalfei Wells and Wellington, 1985 – The Murray-Darling Carpet. This is a smallish race with an unusually even temperament. Usually distinguishable by its creamy coloration around the head.

Morelia spilota (Lacepede, 1804) – Diamond Python. Found in coastal NSW south of Port Macquarie and adjacent parts of far north-east Victoria.

Morelia variegata (Gray, 1824) – Top-end Carpet Python. Found from Cape York, Queensland, west to the Kimberley in WA, including the tropical parts of the NT.



**Top: New Guinea carpet python
Morelia harrisoni.**

**Centre: Southwestern carpet python
Morelia imbricata from Perth, WA.**

**Bottom: *Morelia maddowelli*
from Bundaberg, Queensland.**

Barker and Barker (1999) detail the status of the various types of carpet python (*Morelia*) in captivity as of mid 1999. This includes *M. harrisoni*, which they identify as the carpet snakes coming from the island of New Guinea. It also is presumed that all *Morelia* species (as classified here) will hybridise in captivity (refer to Hoser 1999a). Furthermore, it is known that the following hybridisations in captivity have been done:

Morelia cheynei X *Katrinus fuscus fuscus*
Morelia cheynei X *Austroliasis amethystina*
Chondropython viridis X *Morelia* sp.
 (carpet snake)

The first two cases are detailed in Hoser (1989). This author knows nothing of the latter case other than a photo e-mailed to him in late 1999 from a website called "marvellous mutants". The snake depicted was an immature specimen.



MORELIA HARRISONI SP. NOV.

HOLOTYPE: A female specimen, at the American Museum of Natural History (AMNH 82433) New York, from Port Moresby, PNG. Lat: 9°30' Long: 147°10' collected on or near 30 August 1959 by the Spalding-Peterson Expedition.

PARATYPES: A female specimen, at the American Museum of Natural History (AMNH 103637) New York, from Port Moresby, PNG, . Lat: 9°30' Long: 147°10' collected on or near August 1968 by Roy Mackay.

A specimen, at the American Museum of Natural History (AMNH 107157) New York, from Mawatta (=Katow), Western District, PNG, . Lat: 9°10' Long: 142°55'

DIAGNOSIS: A medium-to-large python similar in most respects to the others in the genus *Morelia*. It is separated from its closest relatives *Morelia cheynei*, *Morelia variegata*, and *Morelia maddowelli* all of which occur in the top third of Australia. *Morelia harrisoni* is separated from these three species by distribution, being the only 'Carpet Python' known to occur in New Guinea.

The snakes labelled by Barker and Barker (1999) as 'Irian Jaya Carpet Pythons', 'Trans Fly' Carpet Pythons' and 'Port Moresby Carpet Pythons' are all of this



**Top: Inland carpet python
Morelia metcalfei
 from Birdsville, Queensland.**

Centre: Diamond python *Morelia spilota* from St. Ives, NSW.

**Bottom: Carpet python
Morelia variegata
 from Bundaberg, Queensland.**



Oenpelli python
Nyctophilopython oenpelliensis
Alligator River, NT.

species. The specimens allegedly from north of the Central Dividing

Range in New Guinea are also believed to be of this species. In New Guinea the apparently disjunct distribution probably reflects either a paucity of collection records and/or intervening areas of unsuitable habitat. The preferred habitat is open savanna woodland such as that found around Merauke in Irian Jaya and near Port Moresby, PNG.

In appearance, *Morelia harrisoni* usually looks somewhat intermediate between *Morelia variegata* and *Morelia cheynei* although *Morelia harrisoni* is highly variable in coloration, both between different localities, within the same locality and even within a single litter of offspring. In line with *Morelia variegata*, *Morelia harrisoni* young are often reddish in colour. *Morelia harrisoni* is one of the smaller varieties of Carpet snake. Adults average slightly less than two metres in total length. It is not known by this author to exceed three metres in length.

The *Morelia harrisoni* seen by this author tend to have a lower

average ventral and subcaudal scale count than *Morelia cheynei*, *Morelia variegata* and *Morelia maddowelli*, however the sample seen is too small to conclude if this trend is general.

Further diagnostic information for the species is provided by Barker and Barker (1999). They also provide photos of this species in life. However again this author notes the general variability in colour in this species and the fact that coloration does change with age. Like all carpet pythons, *Morelia harrisoni* is almost always dorsally patterned with a combination of cross-bars, blotches and spots, occasionally in a manner approaching longitudinal blotches or stripes. *Morelia harrisoni* can best be definitively separated from the other species of *Morelia* by DNA analysis.

Morelia harrisoni is being bred in captivity in the northern hemisphere. Within Australia, the few specimens kept in captivity, including a sub-adult specimen at Sydney's Taronga Zoo, presented no husbandry problems. However, some specimens, particularly juveniles and subadults were snappy in temperament.

ETYMOLOGY: Named after David Harrison, who died of cancer in 1999. Harrison was best known as a leading edge aviculturist. He was also well known as editor of the journal *Avinews*, through which he played a pivotal role in exposing corruption and misconduct in Australian wildlife departments, in particular NSW. Harrison played an essential role in bringing about a re-write of reptile licencing laws and procedures in NSW, however since his death, others who played no useful role in bringing about the change are claiming some of the credit he deserves.

GENUS NYCTOPHILOPYPHON WELLS AND WELLINGTON 1985

This is the genus for the Oenpelli Python, (*Nyctophilopython oenpelliensis*). For diagnostic information and photos of the Oenpelli Python, refer to Gow (1977), Hoser (1989), Ross and Marzec (1990) and references therein. The single species in the genus is confined to the Arnhem Land escarpment area of the Northern Territory, where it is reasonably common. The type locality is near Oenpelli, Arnhem Land, NT.

The species has been bred in captivity by Queensland snake keeper Peter Krauss. Breeding data for the species is provided by Ross and Marzec (1990).

SUMMARY

The new arrangement for Australasian pythons as outlined in this paper, in alphabetical order, is therefore as follows:-

- Aspidites melanocephalus (Krefft, 1864)**
- Aspidites melanocephalus adelyniensis* subsp. nov. (this paper)
- Aspidites melanocephalus daveii* subsp. nov. (this paper)
- Aspidites ramsayi (Macleay, 1882)**
- Aspidites ramsayi panoptes* subsp. nov. (this paper)

Aspidites ramsayi richardjonesii subsp. nov. (this paper)
Antaresia childreni (Gray, 1842)
Antaresia maculosus (Peters, 1873)
Antaresia perthensis (Stull, 1932)
Antaresia saxacola (Wells and Wellington 1985)
Antaresia saxacola campbelli subsp. nov. (this paper)
Antaresia saxacola stimsoni (Smith 1985)
Austroliasis amethystina (Schneider, 1801)
Austroliasis amethystinus clarki (Barbour, 1914)
Austroliasis timorensis (Peters, 1877)
Austroliasis spp. (yet to be formally named)
Bothrochilus boa (Schlegel, 1837)
Chondropython viridis (Schlegel, 1872)
Katrinus fuscus (Peters, 1873)
Katrinus fuscus cornwallisii (Gunther, 1879)
Katrinus mackloti (Dumeril and Bibron, 1844)
Katrinus mackloti dunni (Stull, 1932)
Katrinus savuensis (Brongersma, 1956)
Leiopython Albertisii (Gray, 1842)
Leiopython Albertisii barkeri subsp. nov. (this paper)
Leiopython Albertisii bennettii subsp. nov. (this paper)
Leiopython hoseae sp. nov. (this paper)
Lenhosorus boeleni (Brongersma, 1953)
Liasis olivaceus (Gray, 1842)
Liasis olivaceus barroni (Smith, 1981)
Liasis papuana (Peters and Doria, 1878)
Morelia bredli (Gow, 1981)
Morelia carinata (Smith, 1981)
Morelia cheynei Wells and Wellington, 1983
Morelia harrisoni sp. nov. (this paper)
Morelia imbricata (Smith, 1981)
Morelia macdowellii Wells and Wellington, 1983
Morelia metcalfei Wells and Wellington, 1985
Morelia spilota (Lacepede, 1804)
Morelia variegata (Gray, 1824)
Nyctophilopython oenpelliensis (Gow 1977)

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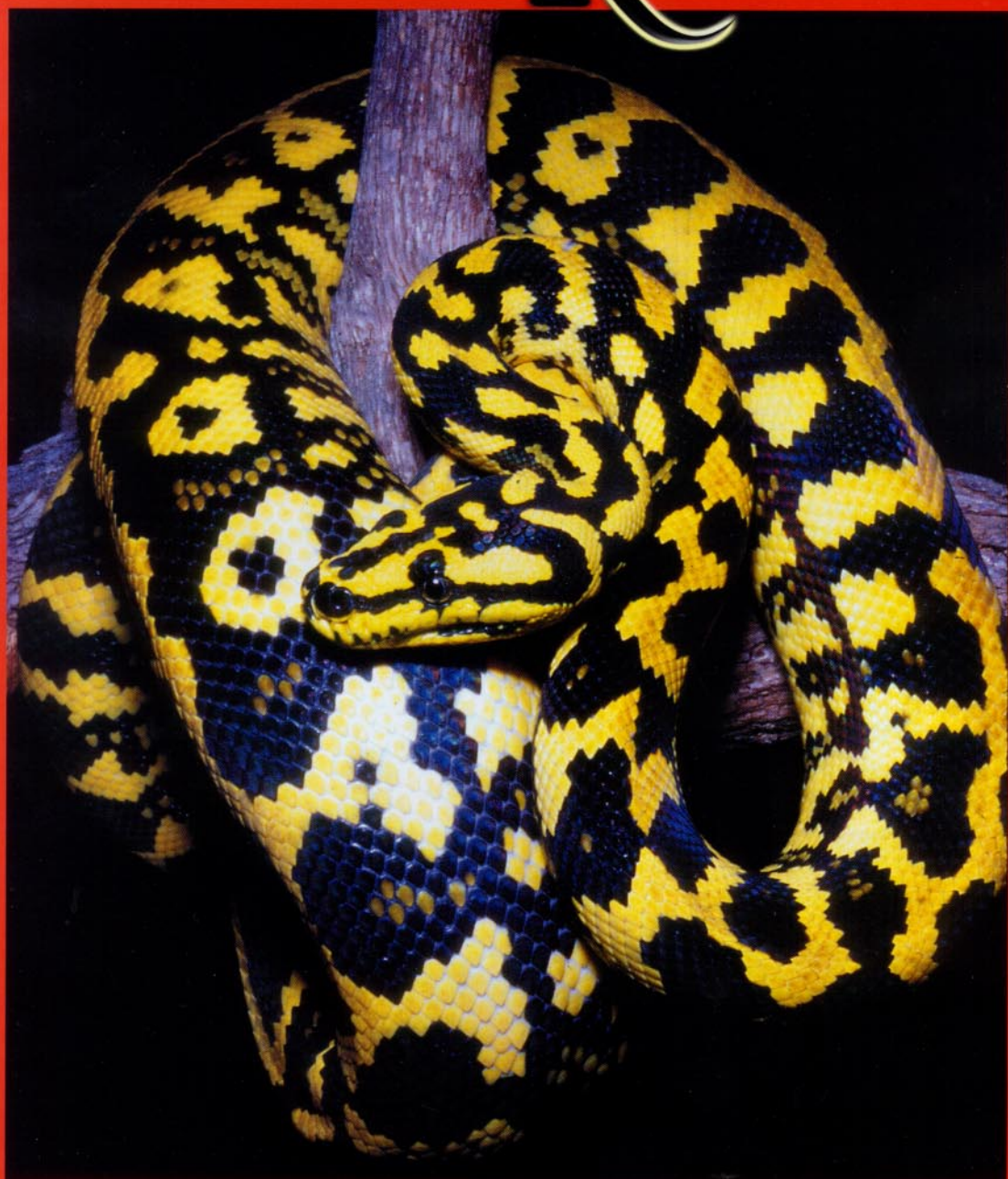
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