

AUSTRALIAN MUSEUM SCIENTIFIC PUBLICATIONS

Kinghorn, J. Roy, 1923. Studies in Australian reptiles. No. 3. *Records of the Australian Museum* 14(2): 126–134. [10 December 1923].

doi:10.3853/j.0067-1975.14.1923.834

ISSN 0067-1975

Published by the Australian Museum, Sydney

nature culture **discover**

Australian Museum science is freely accessible online at
<http://publications.australianmuseum.net.au>
6 College Street, Sydney NSW 2010, Australia



STUDIES IN AUSTRALIAN REPTILES.

No. 3.¹

BY

J. R. KINGHORN, Zoologist.

ON THE GENERA AND SPECIES OF OPHIOSEPS AND APRASIA.

For the purposes of this revision I have had the opportunity, through the generosity of the Trustees of the Western Australian Museum, of examining a series of eleven specimens belonging to the genus *Aprasia*, and also the type of *Ophioseps repens* Fry², in addition to fourteen specimens preserved in the Australian Museum. In the absence of specimens of the genotypes *Ophioseps nasutus* Bocage and *Aprasia pulchella* Gray, I have had to rely entirely on published descriptions and figures of these species, but all the supposed *Ophioseps* spp. which I have been able to examine, including Fry's type, really belong to the genus *Aprasia*³.

GENERIC CHARACTERS.

The series examined ranges from young specimens to adults. In some premaxillary teeth are present, while in others they are absent; some have long snouts, while others have broad short ones; and the number of longitudinal rows of scales varies from 12 to 14.

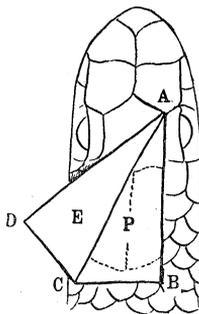


Fig. 1.

Make a clean cut through the skin, following the lateral border of the frontal shield from point A and extend to B. A second cut must be made from B to C, and a very fine scalpel inserted horizontally under point B and worked carefully back and forth until the loose flap of skin E can be turned back to D. The parietal bones P can then be easily examined.

¹ For No. 2, see "Records," xiii, 4, 1921, p. 143.

² Fry—Records W. Austr. Mus., i, 3, 1914, p. 174.

³ Fry's mistake seems to have occurred through his misinterpreting the term *parietal plates*; he evidently referred to the head shields instead of the bones.

As in the case of the genera *Pygopus* and *Lialis* the chief diagnostic character is the condition of the parietal bone; in *Ophioseps* the parietal bone is single while in *Aprasia* it is divided into two, each half being slightly movable, relative to the other, if pressed with a needle. It would appear that more than one author has been misled by the terms "parietals paired" and "parietals single," and has interpreted them as relating to the head shields instead of to the bones. I thoroughly examined the skull of every specimen in the series before me, and Figure 1 will show an easy and clean method of cutting the skin of the head and turning it back so as to give a clear view of the parietals without in any way injuring the specimen or disarranging the head shields.

Jensen's figure⁴ of *Ophioseps* (Figure 2) shows considerable differences in the shape of the skull bones as compared with *Aprasia* (Figure 3) but, making due allowance for the semi-diagrammatic quality of his drawing, I should be inclined to separate the genera by the frontal entering the orbital space or being separated from it by the posterior extension of the prefrontals, which form a suture with the postfrontals.

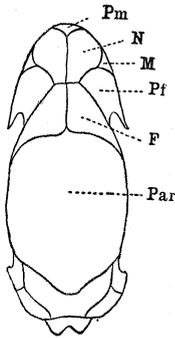


Fig. 2.

After Jensen.

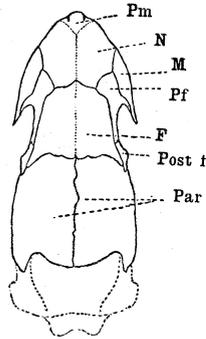


Fig. 3.

From specimen in Australian Museum.

F=frontal, M=maxillary, N=nasal, Par=parietal, Pf=prefrontal,
Pm=Premaxillary, Post f=Postfrontal.

Although Jensen's figures show that premaxillary teeth are absent in *Ophioseps*, I do not feel justified in using it as a generic character under the present circumstances. *O. repens* Fry is without teeth, and *A. pulchella* Gray possesses them, but in all other generic characters the former is identical with the latter, and therefore Fry's *repens* must be placed, for the time being, in the genus *Aprasia*.

These comparisons lead me to the conclusion that there are two species of *Aprasia* in Australia, viz., *Aprasia pulchella* Gray and *Aprasia repens* Fry.

⁴Jensen—Vidensk. Meddel., iii, 1900, p. 317, figs. A-C.

Key to Genera.

- Parietal bone single, frontal reaching the orbit. (Fig. 2.) *Ophioseps*.
 Parietal bone paired, frontal separated from the orbit by
 the pre- and postfrontal. (Fig. 3.) *Aprasia*.

OPHIOSEPS *Bocage*.⁵

- Ophioseps* Bocage, Journ. Acad. Lisboa, iv, 1873, p. 231.
Ophiopsiseps Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 436.
Ophiopsiseps Jensen, Vidensk Meddel., iii, 1900, p. 317, pl. iii.
Ophioseps Werner, K. Pr. Akad. Wiss. Berl., Das Tierreich, Lief. 33,
 1912, p. 26.

Degenerate form, closely related to *Aprasia*. Premaxilla not projecting far between the nostrils. Frontals paired. Parietal large, unpaired. Frontals reaching the orbits. Postfrontal and jugal are not present. Teeth only in the lower jaw, two on each side, very small. Ear opening concealed, rudiments of the hind limbs very small. Scales smooth, cycloid, no preanal pores.

OPHIOSEPS NASUTUS *Bocage*.⁶

- Ophioseps nasutus* Bocage, Journ. Acad. Lisboa, iv, 1873, p. 232.
Ophiopsiseps nasutus Jensen, Vidensk. Meddel., iii, 1900, p. 317.
Ophiopsiseps nasutus Boulenger, Brit. Mus. Cat. Liz., iii, 1887, p. 436.
Aprasia brevirostris Werner, Fauna. Südwest-Australiens, ii, 1909,
 p. 266, fig. 2.
Ophioseps nasutus Werner, K. Pr. Akad. Wiss. Berl., Das Tierreich,
 Lief. 33, 1912, p. 26.
Ophioseps nasutus Fry, Rec. W.A. Museum, i, 1912, p. 181.



Fig. 4.

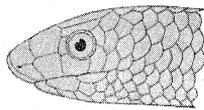


Fig. 5.

After Jensen.

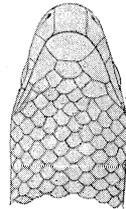


Fig. 6.

⁵ Translated from Werner's description.⁶ Translated from Werner's description.

Snout projecting, rounded. Eye well developed, surrounded by a ring formed of small shields. Tail shorter and more slender than the rest of the body. Rostral shield higher than broad, with parallel sides, the part visible from above being triangular. Nasal shields in contact with one another behind the rostral, and fused with first supralabial. Nostril sometimes connected by means of a short horizontal fissure with the anterior side of the upper labial. Prefrontal shields paired, in contact in the middle line and on the side bordering the second upper labial. A large six or eight-sided frontal shield with rounded hinder edge. Parietal shields not larger than the adjoining scales. Postocular shield small or absent. A small supraocular shield. Mental large, the hinder side being truncate. First pair of lower labials large, separated in the centre by a second small shield. Fourteen rows of scales round the body. Sometimes two enlarged preanals.

Upper surface brown, the individual scales with parallel dark streaks in the centre. Those on the sides of the body are broader.

Locality.—Lion Mill, Donnybrook, West Australia (Type).

Genus APRASIA.

Aprasia Gray, Ann. Mag. Nat. Hist. ii, 1839, p. 331.

Aprasia Boulenger, Brit. Mus. Cat. Liz. i, 1885, p. 245.

Aprasia Werner, K. Pr. Akad. Wiss. Berl., Das Tierreich, Lief. 33, 1912, p. 25.

Parietal bones distinct, paired. Frontals paired, separated from the orbit by the posterior extension of the prefrontals, which form a suture with the postorbital.

Premaxillary teeth present (*pulchella*) or absent (*repens*), two teeth on each side of the lower jaw, all microscopic. Ear opening concealed. Slight rudiments of hind limbs externally, head with large symmetrical shields. No parietals. Scales smooth, cycloid, imbricate. Belly scales scarcely enlarged. No preanal pores.

Habitat.—West and South Australia.

Type of genus in British Museum (Natural History) (*A. pulchella* Gray).

A comparison of the characters of the twenty-five specimens examined showed that those of *A. repens* were consistently similar while those of *A. pulchella* alone varied sufficiently to be dealt with in detail.

Whatever modifications or slight variations may occur, as far as head shields are concerned, it is positive that all those specimens which I have placed as *A. repens* are without premaxillary teeth, and have a long narrow snout, whereas those placed under *A. pulchella* possess teeth and have a broader and shorter snout. Furthermore the postocular scale is absent in *A. repens* and present in *A. pulchella*.

Key to the species of *Aprasia*:

- Postocular present, 4th upper labial separated from the supraocular by the postocular scale. Length of snout from eye, less than 3 times the diameter of eye. Premaxillary teeth present *A. pulchella*.
- Postocular absent, 4th upper labial in contact with supraocular. Length of snout from eye, equal to 3 or more times the diameter of the eye. Premaxillary teeth absent *A. repens*.

APRASIA PULCHELLA Gray.

Aprasia pulchella J. E. Gray, Ann. Mag. Nat. Hist., ii, 1839, p. 331.

Aprasia pulchella J. E. Gray, in G. Grey's Two Exped. Austr., ii, 1841, app. E, p. 428, pl. 4, fig. 2.

Aprasia pulchella Lutkën, Vidensk. Meddel., 1862, p. 300, pl. 1, fig. 3.

Aprasia octolineata Peters, Monatsb. Akad. Wiss. Berl., 1863, p. 233.

Aprasia pulchella Gunther, Ann. Mag. Nat. Hist. (4), xii, 1873, p. 145.

Aprasia pulchella Boulenger, Brit. Mus. Cat. Liz., i, 1885, p. 246.

Aprasia pulchella McCoy, Prod. Zool. Victoria, ii, 17, 1888, p. 233, pl. 162, fig. 1.

Aprasia pulchella Werner, K. Pr. Akad. Wiss. Berl., Das Tierreich, Lief. 33, 1912, p. 25, figs. 1-3.



Fig. 7.

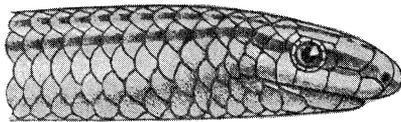
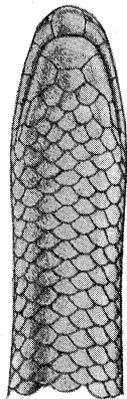
Fig. 8.
After McCoy.

Fig. 9.

Snout projecting beyond the lower jaw, rounded, eye well developed, its diameter larger than its distance from the mouth. Eyelid rudimentary, a circular scaly ring. Tail shorter than body, subequal in diameter throughout, the tip being obtuse and rounded. Three or four anal scales, the central ones either elongated transversely or triangular. Rudiments of hind limb extremely small, and hardly visible. Rostral broader than long or higher than broad, visible from above. Nostril situated in very large nasals, either isolated or connected with second upper labial by a suture. The nostrils form a suture on the top of the snout and fuse with the first upper labial, thereby reaching the lip. There is one preocular, one postocular scale, five or six upper labials, the third and fourth bordering the eye, and two or three lower labials. The inter nasals are absent, the frontal is large, twice or more times as broad as the supraoculars, about $1\frac{1}{2}$ times as long as broad, and as long as, or longer than its distance from the end of the snout. Its sides may be parallel or diverging posteriorly or anteriorly; it is six-sided, the anterior being angular and the posterior broadly rounded.

The parietal shields are absent, but the parietal scales are slightly larger than those on the occiput. Mental large, broadly trapezoid. Twelve or more series of scales around the body. Head shields here and there covered with minute pits.

Colour.—Yellowish above and below with a number of longitudinal (generally 8) dark brown lines formed by series of dots.

Localities of Specimens Examined.—One from West Arthur, via Wagin, W.A. Thirteen from "Australia," but there is no reason to doubt that they came from Western Australia.

Type in British Museum.

COMPARATIVE.

Of the fourteen specimens of *A. pulchella*, seven have twelve rows of scales round the body, the rest fourteen rows. Apart from this variation in the number of scales, the characters are fairly constant and warrant placing all the specimens under one species.

General.—Comparative details of the characters may be given as follows:—In all the specimens parietal scales are slightly larger than those on the occiput. There may be three or four anal scales, which may vary in size and shape, but in no way does the variation appear to be characteristic of a group. This same may be applied to *A. repens* and *O. nasutus*. There may be three triangular, or two enlarged rather rounded scales, bordered in each case by small ones. Throughout the series there is one preocular and one postocular, the latter separating the fourth upper labial from the supraocular; this I have used as a specific character in the key. One abnormal specimen has two preoculars and one postocular on one side of the head and two postoculars on the other.

Shape of the Snout.—This is slightly variable; it may be indistinctly trilobed or bluntly rounded, and in the latter case, which is most general, it may be said to be almost angular; the rostral is visible from above, the size of the portion visible varying slightly in different specimens; it may be higher than broad or as broad as high; in some cases it gradually narrows from the lower angles to the apex, while in others the sides are parallel for a short distance and then converge to the apex.

Nostrils.—These are situated in the large nasals, which form a suture on the snout, thus excluding the internasals (which are absent), and they fuse with the first upper labial, appearing to reach the lip; the nostril may be isolated or connected with the second upper labial by a suture.

Labials.—There may be five or six lower labials, and the third and fourth upper labials border the eye.

In the following paragraphs, wherever the first upper labial is mentioned, I mean that one which is joined with, and which in some cases cannot be distinguished from the lower half of the nasal.

Frontal Shield.—The frontal shows little variation in adult specimens, more in the young; it is generally about twice as broad as the supraocular though never less, and it may be as long as, or longer than its distance from the end of the snout. On an average it is about $1\frac{1}{2}$ times as long as broad, and may be broader in front than behind, or vice-versa, or equal in measurement across the anterior and posterior portion. It is obtusely angular anteriorly and broadly rounded posteriorly.

The head shields are here and there (especially the anterior ones) covered with minute pits. These have been described as papillæ.

APRASIA REPENS *Fry.*

Ophioseps repens Fry, Rec. W. Austr. Mus., i, 1912, pp. 178-182, text figures.

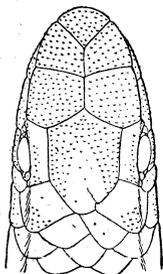


Fig. 10.

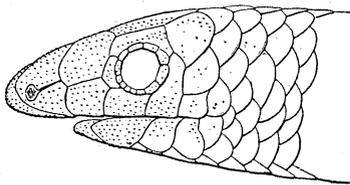


Fig. 11.
After Fry.

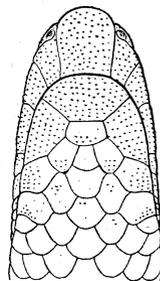


Fig. 12.

Snout projecting, slightly hooked and trilobed; a little more than three times the diameter of the eye. Eye considerably longer than its distance from the mouth, surrounded by a ring of small scales, of which the posterior are the largest. Portion of the rostral seen from above is once and one-half as long as its distance from the frontal, once and a quarter as broad as long, as long as the diameter of the eye; the portion seen from below longer than broad and slightly narrower behind than in front. Nasals apparently fused with the first supralabial of each side, in contact behind the rostral; a little shorter than the prefrontals, their suture being the same length as that of the prefrontals. Nostril large, not visible from above; a very distinct groove runs from its posterior edge to the lower anterior border of the prefrontal. Prefrontals a little larger than the nasals, a little more than half the length of the frontal, forming a suture in the median line and with the second supralabial. Frontal six-sided; broader in front than behind; almost once and a half as long as broad, as long as its distance from the end of the snout. Supraocular narrow, extending down behind the eye and meeting the third supralabial. A pair of parietal shields larger than the adjoining scales, in contact behind the eye with the third supralabial. A small preocular, no postocular. Five supralabials, four of them being distinct, the fourth very high and band-like, in contact behind the eye with the supraocular and the parietal scale, the fifth smallest, squarish. Mental large, almost twice as broad as long. Four sublabials, the anterior pair the largest and separated from each other in the median line by a small shield, which is followed by three others, the middle one of which is the smallest. Head shields thickly dotted with minute papillæ. Scales smooth, Typhlops-like, in twelve series round the body. Preanals not enlarged. No external rudiments of limbs. Tail one-third as long as the body, terminating in a circular scale.

Colour (spirits).—Body light greyish-brown above, slightly lighter beneath. Longitudinal rows of faint spots on the dorsal and lateral scales, these spots fainter and the rows more numerous on the sides. Head-shields with faint brown marks. Tail yellowish, the rows of spots of a reddish colour. Total length 145 mm. Tail 45 mm.

Type in Western Australian Museum, reg. no. R.364.

Described from a single specimen from Western Australia, without exact locality.

COMPARATIVE.

The eleven specimens which have no postocular and in which the diameter of the eye is equal to three or more times the length of the snout, and which (with the exception of three specimens too small to be examined) have teeth in the upper jaw, I have placed as *Aprasia repens* Fry. The various characters may be enumerated as follows:—

There are no ordinary enlarged parietal shields but the parietal scales are invariably larger than the surrounding occipital scales. The anals show but little variation; there may be one long transverse scale with a small one at each end; or the central one may be a little smaller and the outer ones slightly larger. There is one preocular and no postocular, thereby allowing the fourth upper labial to join the supraocular.

Shape of Snout.—This, which may be slightly or distinctly trilobed, is never rounded or angulate as in *A. pulchella*. The nostril suture connects with the prefrontal in all the specimens, and never with the second upper labial as in *A. pulchella*. The enlarged nasals form a suture with the first upper labial, thus giving the appearance of a nasal reaching the lip.

As in *A. pulchella*, the internasals are absent.

Frontal Shield.—This may be as long as, or slightly longer than, its distance from the snout, it is about twice as broad as the supraocular, but may be a little more in some specimens; in the adults it is obtuse-angled in front and rounded behind as in *A. pulchella*, but in the very young specimens the posterior border is produced backwards forming a narrower portion, as if squeezed in on each side. Several specimens bear a small hard clasp or spur on each side of the vent, in addition to the rudiments of the hind limbs which appear as soft loose scales; evidently those with the hard clasps are males, but the presence or absence of these does not appear to have any bearing on the type of scaling in respect to the preanals.

The eye is much larger than its distance from the snout, and is about equal to two-thirds the distance between them. Many of the head shields, especially the anterior ones, are covered with minute pits, these having been described by Fry as papillæ.

Localities.

Of the series examined three specimens are from Bumbleyung, W.A.; one from Fremantle; one from Cottesloe, W.A.; one from Midland Junction; and two, including Fry's type of *O. repens*, are labelled W. Australia. Three without locality no doubt come from West Australia.
