

inland away from the coastal and mangrove habitat of *indicus*(1) and *salvator*.(2) It is at once distinguished from *indicus* and *salvator* by its short head and position of nostrils on upper surface of snout. The nearest form appears to be *salvator*, it can be separated thus:

Transversely enlarged supraoculars; oval keeled nuchals . . . *salvator*.

Supraoculars irregular, subequal; nuchals irregular without keels . . . *bulliwallah*.

Natural food consists of frogs and fish, and in captivity it is induced only with difficulty to eat anything else.

The type-specimen, in spirits, has been donated to the Australian Museum.

#### REFERENCES

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Rooij, N. de (1915).—Rept. Indo-Aust. Arch. i, pp. 146-47.

#### EXPLANATIONS OF PLATES XXVII—XXIX.

*Varanus bulliwallah*, sp. nov., in life.

*Varanus bulliwallah*. Dorsal aspect of head.

*Varanus bulliwallah*. Lateral aspect of head.

## A New Snake from Queensland

By ERIC WORRELL

(Figs. 1-3.)

Several years ago, while examining a collection of snakes at Melbourne Ward's Gallery of Natural History and Aboriginal Art in the Blue Mountains I came across a small snake, superficially resembling "*Denisonia gouldi*," from Dulacca, Queensland. I observed a number of differences, however, which were subsequently borne out in a large series from Queensland collected by Mr. W. Dunmall in the Glenmorgan area. A series of skulls from Queensland was compared with a series of skulls from *Denisonia gouldi* (Gray 1841) from Western Australian localities, and many obvious differences were noted. It is proposed to describe the Queensland snakes as a new species which I have pleasure in naming after Mr. J. Dwyer of Cairns, who was instrumental in locating Mr. Dunmall's series and obtaining working specimens.

Loveridge mentions a specimen of "*gouldi*" given by Mrs. H. McKee of Dalby to a member of the Harvard Expedition. Loveridge comments that this specimen, being the first recorded from Queensland, "should be received with caution." Apparently this was the same as the species I propose to describe as new, as Dalby is in the same area as Glenmorgan, and the snake is a common species.

#### ACKNOWLEDGMENTS

Thanks are due to Mr. W. Dunmall, Mr. M. Ward, Mr. L. Robichaux and Mr. J. Dwyer for specimens, and Mr. H. Chalmers for his assistance and X-rays. Mr. J. Dwyer kindly drew the illustrations.

*Denisonia dwyeri*, sp. nov.

Maxillary almost as far forward as palatine; ectopterygoid longer than lower aspect of maxillary bone; a pair of straight fangs is followed by four small grooved recurved teeth beginning at posterior of maxillary arch.

The obvious differences between the skulls of *Denisonia gouldi* and *Denisonia dwyeri* are illustrated. The most outstanding feature, however, is the greater prolongation of *dwyeri*, the smaller frontal foramen, the differently shaped premaxilla, fronto-nasals, prefrontals and post-parietal area.

(1) *Tupinambis indicus*, Daudin, Rept. iii, 1802, p. 46, pl. XXX.

*Varanus indicus*, Boulenger, Cat. Liz. ii, 1885, p. 316 (s. syn.).

(2) *Stellio salvator* Laurenti, Syn. Rept., 1768, p. 56.

*Varanus salvator* Boulenger, Cat. Liz. ii, 1885, p. 314 (s. syn.).



In general form the head is larger and snout more depressed than in *gouldi* and the neck is a little more distinct. The snout is more pointed. There is no canthus rostralis. Eye about as large as its distance from mouth, pupil round. Body cylindrical to depressed, scales smooth in 15 rows, ventrals rounded.

Scalation: Rostral broader than deep, sharply angulate, in front, visible dorsally; nasal entire; internasals a little smaller than prefrontals; single prefrontal in contact with nasal; frontal posteriorly acute, almost  $1\frac{1}{2}$  times as long as broad, longer than its distance to snout, about twice as broad and  $1\frac{1}{2}$  times length of supraoculars; parietals large, temporals 2+2, anteriors larger; two postoculars; 6 supralabials, 3rd and 4th enter eye; 7 infralabials, 4th largest; two pairs of chinshields of similar size, both pairs in contact; 1st to 3rd or 4th infralabials in contact with anterior chin-shields; 4th, or 3rd and 4th infralabials in contact with posterior chin-shields.

The head-shields of paratypes agree with the type except that in the paratype lodged at Ocean Beach Aquarium a small pair of scales follows rostral, abnormally occupying part of interanasal area.

*Glenmorgan type*: 15 scale rows; ventrals 148; anal 1; subcaudals 31, entire.

Specimen donated to Australian Museum.

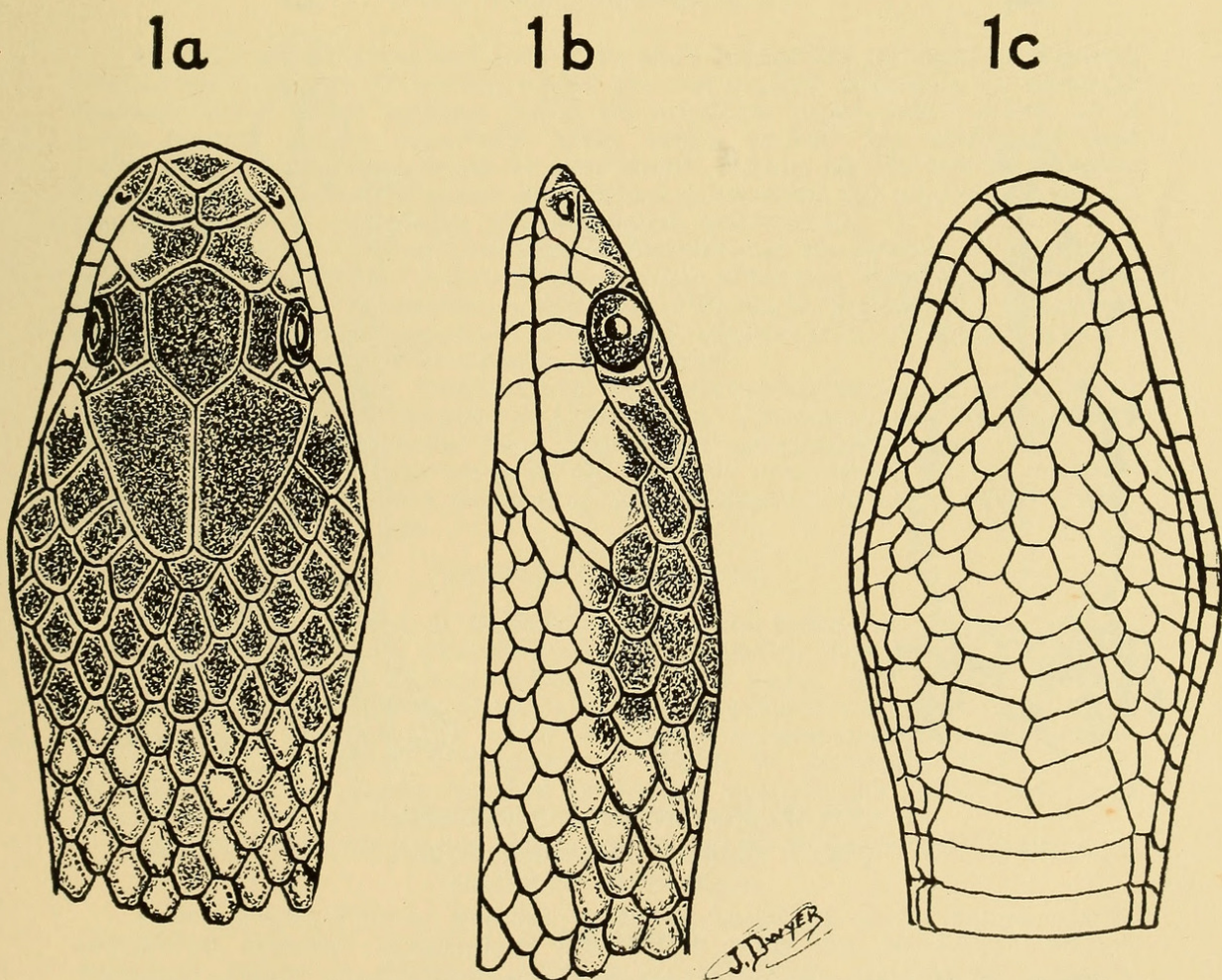


Fig. 1a. Dorsal aspect *Denisonia dwyeri*.

Fig. 1b. Lateral aspect *Denisonia dwyeri*.

Fig. 1c. Ventral aspect *Denisonia dwyeri*.



*Glenmorgan paratype*: 15 scale rows; ventrals 152; anal 1; subcaudals 25 entire. Specimen lodged in author's collection at Ocean Beach Aquarium, Woy Woy, N.S.W.

*Dulacca paratype*: 15 scale rows; ventrals 147; anal 1; subcaudals 27 entire. Specimen lodged at Melbourne Ward's Gallery of Natural History and Aboriginal Art, Medlow Bath, Blue Mountains, New South Wales.

*Goorganga Ranges paratype*: 15 scale rows; ventrals 152; anal 1; subcaudals 34 entire. Being the largest specimen from which a skull was taken, the body, collected damaged on the road, has been kept and is lodged at Ocean Beach Aquarium.

Colour: Juvenile to medium specimens black-headed with front of snout and sides of head whitish, body light brown with black reticulations around scales, the belly is white. In adult forms the body scales are dark brown to black.

Measurements: (Type) length 309 mm. or  $12\frac{1}{8}$  inches. Tail 40 mm., head 13 mm. The Goorganga specimen measures 484 mm. or 19 inches with a body-diameter of about 13 mm. or  $\frac{1}{2}$  inch.

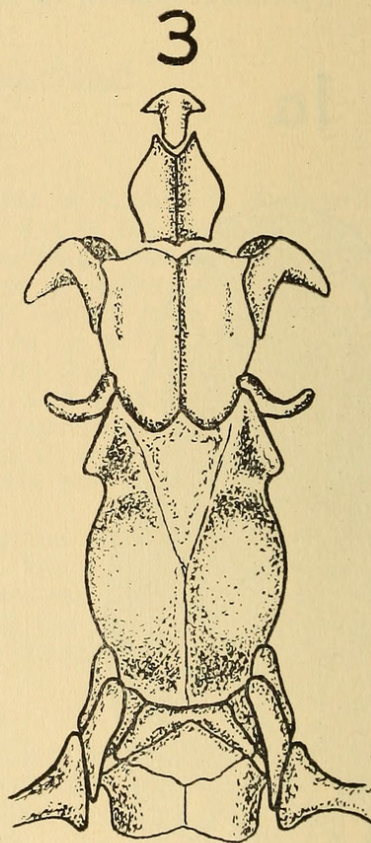
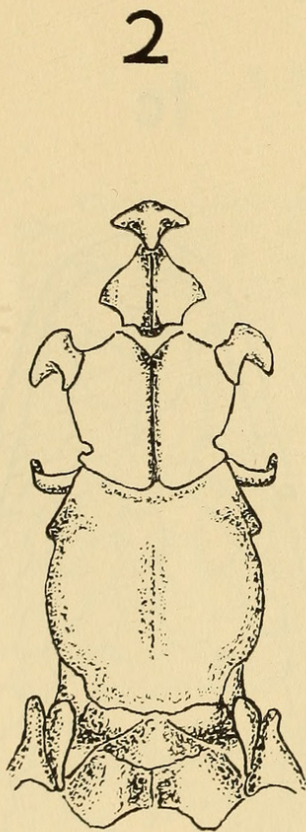


Fig. 2. Skull of *Denisonia gouldi*.

Fig. 3. Skull of *Denisonia dwyeri*.

#### Discussion.

These small snakes were all collected under flat stones, and a number I kept in captivity were nocturnal and fed on small skinks. While there are numerous osteological differences between *gouldi* and *dwyeri* the small size of most specimens of both snakes makes confusion likely on external characters alone. Adult specimens, when compared, are readily distinguishable.



The most consistent external features in which they differ to any marked degree are as follows:

Head large; rostral sharply angulate in front; frontal longer than its distance to snout ..... *dwyeri*  
 Head smaller; rostral obtusely angulate; frontal about as long as its distance to tip of snout ..... *gouldi*

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 Loveridge, A. (1934).—Bull. Mus. Comp. Zool. LXXVII, 6, p. 288.

## Notes on Skull-characters of Some Australian Snakes

By ERIC WORRELL

(Plate XXX; Text-figures 3-8.)

In this paper obvious and consistent skull-characters are used to separate controversial species of snakes which are not readily separable by external features alone. Most systems based on scalation alone break down on a large enough series, especially when small snakes are concerned and infinitesimal dimensions must be considered. Colour on its own is unsatisfactory, although in this paper osteological differences are also supported by colour-differences. There are also ecological differences.

It is proposed to show that specific distinctions are present in the skulls of the following snakes: *Liasis fuscus*, *Liasis albertisii*, *Denisonia maculata*, *Denisonia devisii*, *Denisonia nigrescens*, *Denisonia pallidiceps*, *Denisonia coronoides*, *Denisonia mastersi*, *Denisonia nigrostriata*, *Denisonia gouldi*, *Demansia olivacea*, and *Demansia psammophis*.

In most part the illustrations are self-explanatory, so unnecessary measurements are not included in these notes. The characters are consistent in a series, and age-changes have been taken into consideration. The most variable age-changes take place in the parietal bone which in the juvenile stage is shorter and more bulbous at its proximation to the frontals which broaden slightly with age.

#### ACKNOWLEDGMENTS

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Special thanks are due to Mr. J. Dwyer for his finely executed figures.

#### Subfamily PYTHONINAE.

*Liasis fuscus* Peters. Frontal bones as broad as deep; nasals small; postorbital laterally broadest at its suture with the maxillary; orbital periphery larger in diameter than in *L. albertisii*. Mandibular foramen reduced.

Dentition: Maxillaries about 21, slightly enlarged anteriorly with gradual degradation posteriorly; palatines 7, slightly enlarged anteriorly; pterygoids about 12, subequal; dentaries about 20, slightly enlarged anteriorly with



Worrell, Eric. 1956. "A new snake from Queensland." *The Australian zoologist* 12, 202–205.

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