

TWO NEW *DIPORIPHORA*
(LACERTILIA, AGAMIDAE) FROM
WESTERN AUSTRALIA

G.M. STORR*

[Received 10 January 1978. Accepted 30 March 1978. Published 5 June 1979.]

ABSTRACT

Diporiphora pindan and *D. valens* are described, and a key is provided for the twelve species and subspecies of *Diporiphora* known from Western Australia.

INTRODUCTION

In my revision of *Diporiphora* (Storr, 1974) I observed that *D. winneckeii* in its typical habitat (desert sand dunes) was a slender lizard with small head and weakly keeled scales. Specimens from clayey or stony soils were more robust, larger headed and less smooth; they were regarded as ecotypic variants of *winneckeii*. Subsequent collections have rendered this treatment invalid, for the Derby variant has proved to be sympatric with true *winneckeii* in the vicinity of the Edgar Ranges, which necessitates its description as a full species. Re-examination of the Tom Price/Kumarina variant has revealed that it is even more distinct from *winneckeii*, and it too is described herein.

Meanwhile Houston (1977) has re-examined much of the material that I identified as *D. winneckeii*. Specimens from western South Australia were allocated to a new species, *D. linga*; the Derby variant was removed from *winneckeii*; and the residue was informally divided into eastern and western races of *winneckeii*, the latter including the Tom Price/Kumarina variant.

The present paper is based solely on material in the Western Australian Museum, except for a specimen in the National Museum of Victoria (NMV). The key includes a taxon not previously recorded from Western Australia, namely *D. bennettii arnhemica*; two specimens (WAM R23061-2) from

* Head, Department of Ornithology and Herpetology, Western Australian Museum.

43 km ESE of Halls Creek were overlooked in my revision. I now consider *D. margaretae* a full species; it seems to be closer to *pindan* than to *bilineata*.

Besides mapping the distribution of the new species (Map 1), I have prepared a map (Map 2) for *D. winneckeii*; its amended Western Australian range is 'arid zone north to Nita Downs, Edgar Ranges (18°53'S, 123°43'E) and Mt Romilly, and south on the northwest coastal plain to Wandagee and in the Great Victoria Desert to Streich Mound; mainly in spinifex-dominated dunes and sandplains.'

DIPORIPHORA PINDAN SP. NOV.

Holotype

R58402 in Western Australian Museum, collected by Mr R.E. Johnstone on 17 April 1977 at 5 km N of Coulomb Point, Western Australia, in 17°18'S, 122°10'E.

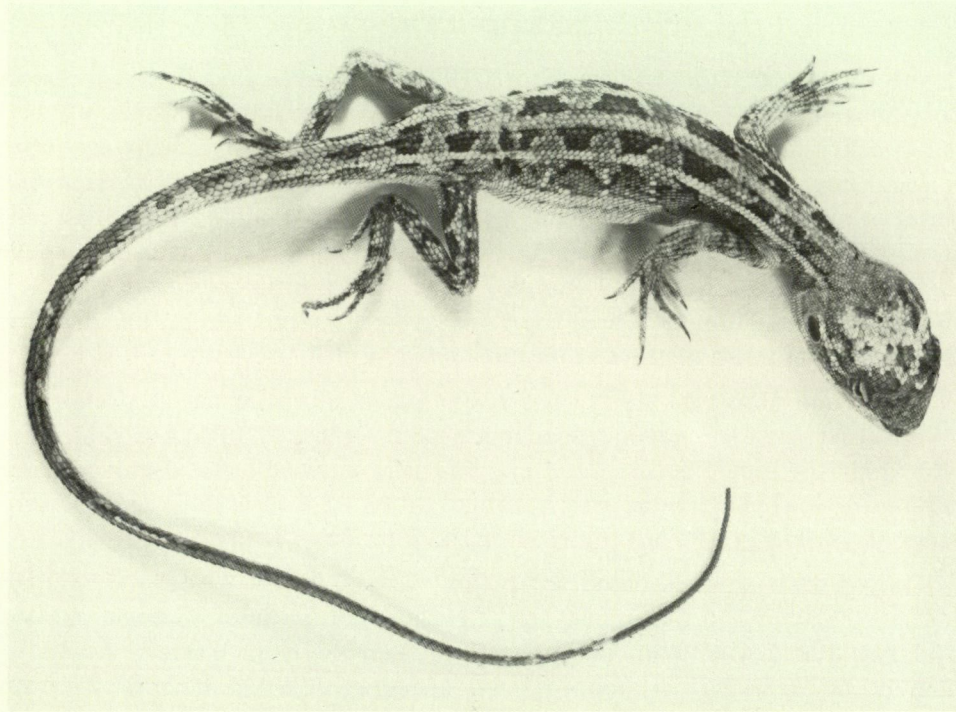
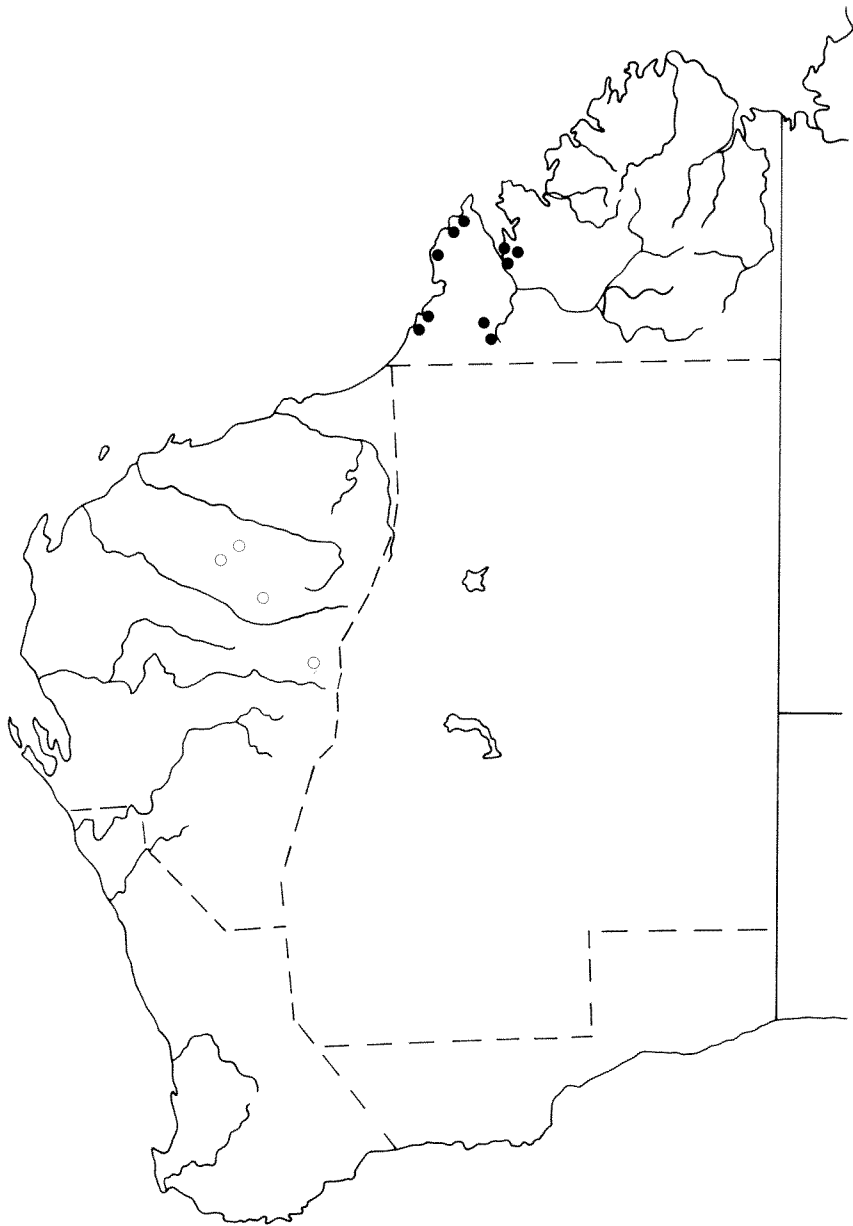


Plate 1: Holotype of *Diporiphora pindan*.



Map 1: Map of Western Australia, showing location of specimens of *Diporiphora pindan* (solid circles) and *D. valens* (hollow circles).

Diagnosis

A small *Diporiphora* with homogeneous dorsals, no gular fold, no post-auricular fold or spine, and very weak scapular fold. Most like *winneckei* but distinguishable by its more strongly keeled scales (e.g. gulars weakly keeled, rather than smooth), stouter body and limbs, larger head and narrower vertebral stripe.

Distribution

Arid and semiarid west Kimberley from Dampier Land south to Lagrange and east to Derby and the Edgar Ranges, mainly in pindan (a thicket, mostly of *Acacia* spp., growing on light red soils). Also recorded by Houston (1977) for Joanna Spring in the Eastern Division.

Description

Snout-vent length (mm): 31-61 (N 57, mean 47.8). Length of appendages (% length of body): head 31-48 (N 55, mean 37.7), foreleg 46-70 (N 55, mean 55.2), hindleg 73-113 (N 52, mean 89.0), tail 238-405 (N 51, mean 312). Width and depth of head (% length of head) respectively 60-80 (N 54, mean 67.4) and 46-65 (N 54, mean 54.6).

Upper labials 11-14 (N 53, mean 12.7), including 0-3 small scales at angle of mouth. Lamellae under fourth toe 19-27 (N 52, mean 22.9). Preanal pores 0-3 on each side.

No nuchal crest. Dorsals, laterals and ventrals moderately strongly keeled; gulars weakly keeled. Keels of laterals orientated upwards and backwards. One or two spines often present at end of white labial streak (not to be confused with post-auricular spines of *D. margaretae*).

Dorsal and lateral ground colour pale to moderately dark reddish brown. Grey vertebral stripe about twice as wide as white or grey dorsolateral stripe. *Ca* 8 blackish brown cross-bands on back and upper lateral zone, broken by pale longitudinal stripes, narrowest at contact with dorsolateral stripe. White stripe from orbit to top of ear. Lower lateral zone white or grey spotted white. Lips and under surface white, except occasionally for 5-6 grey longitudinal stripes on throat (the outer pairs converging on chin) and less commonly two faint grey longitudinal stripes on venter. Occasional specimens of all ages are completely devoid of pattern.

Remarks

D. pindan is so like *D. winneckei* (especially the far northwestern population, which likewise has no gular fold) that it is hard to believe that they are more than races of the same species. Yet the two taxa are sympatric

in the vicinity of the Edgar Ranges, *pindan* occupying the pindan country, and *winneckeii* the sand dunes.

Houston (1977) was less impressed by these resemblances. He regarded *pindan* as closer to *bilineata* (= *margaretae*) than to *winneckeii*.

Paratypes

Kimberley Division (W.A.): Martins Well (16°34'S, 122°51'E) (58500, 58514-5); Beagle Bay (46463); 5 km N of Coulomb Point (58403-10, 58461, 58503, 58516); Coulomb Point (40266); 'Dampier Land' (58517); Derby (15185, 20262-4, 20317-29, 26834, 46661, NMV D2111); 26 km ESE of Derby (58605); 24 km SSE of Derby (32167); 130 km E of Broome (36336); Streeters Station, near Broome (116); Injudinah Creek (27638); Lagrange (46216); near Edgar Ranges in 18°21'S, 122°53'E (53797, 54013-4, 54018-22, 54028-31, 54038), in 18°21'S, 123°03'E (53998), and at 37 km SSE of McHugh Bore (54080).

DIPORIPHORA VALENS SP. NOV.

Holotype

R31009 in Western Australian Museum, collected by Messrs C. Tideman and R.S. Robinson *ca* December 1968 near Tom Price, Western Australia, in *ca* 22°45'S, 117°45'E.

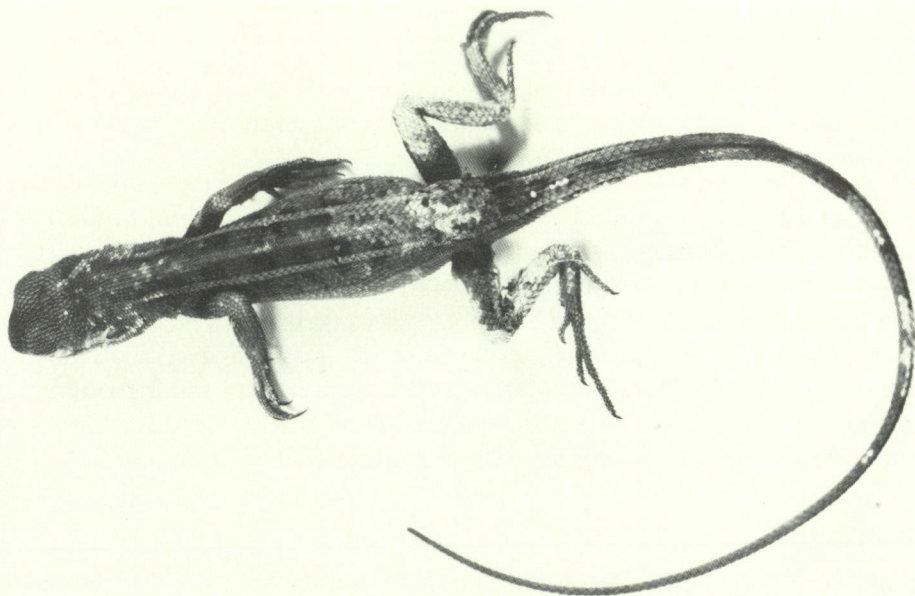


Plate 2: Holotype of *Diporiphora valens*.

Diagnosis

A medium-sized *Diporiphora* with homogeneous dorsals, strong gular and scapular folds and usually some indication of post-auricular fold, ridge or spines. Further distinguishable from *D. winneckeii* by its greater size, stouter body and limbs, larger and more strongly keeled scales (e.g. gulars weakly keeled, rather than smooth) and narrower vertebral stripe.

Distribution

Arid western plateau of Western Australia from the Hamersley Range southeast to Kumarina.

Description

Snout-vent length (mm): 32-66 (N 9, mean 54.0). Length of appendages (% length of body): head 32-39 (N 9, mean 35.2), foreleg 50-62 (N 9, mean 54.8), hindleg 84-97 (N 8, mean 90.8), tail 284-364 (N 7, mean 325). Width and depth of head (% length of head) respectively 63-72 (N 9, mean 68.1) and 51-59 (N 9, mean 56.6).

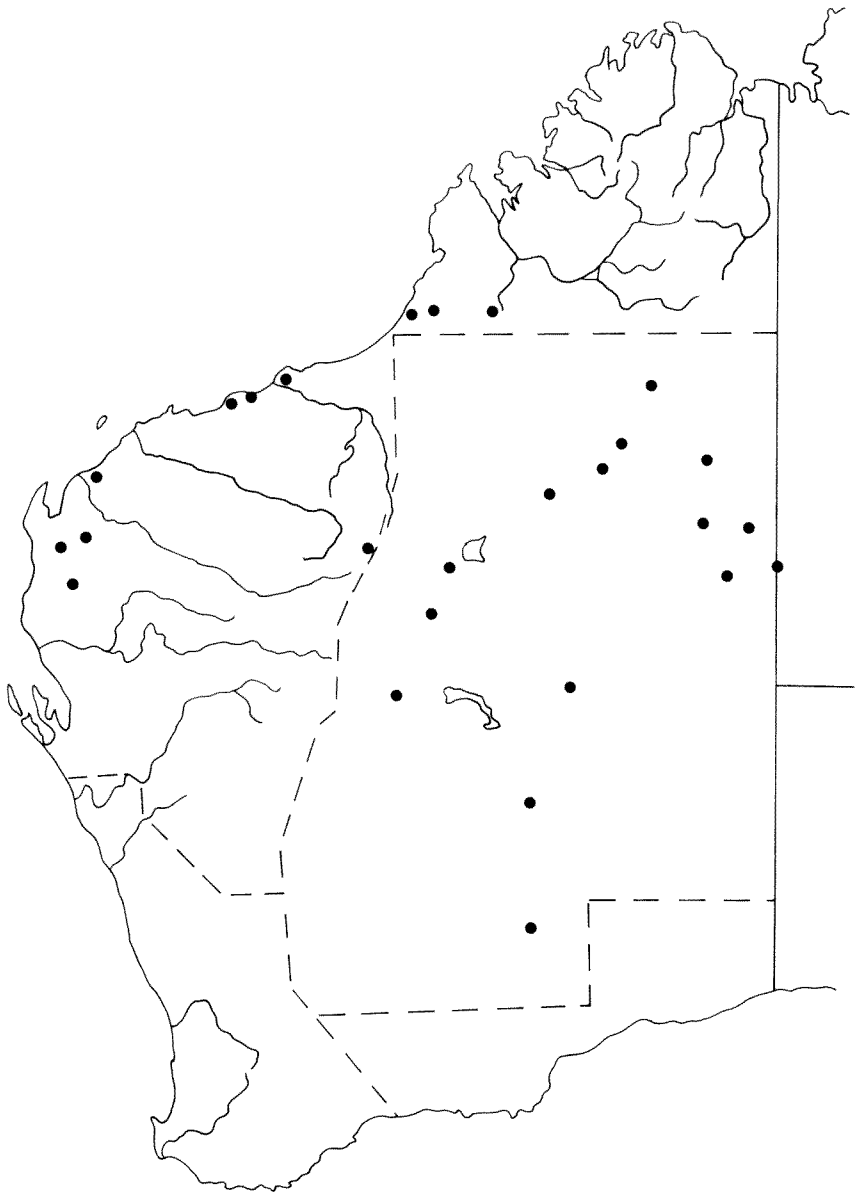
Upper labials 11-14 (N 9, mean 12.8), including 1-3 small scales at angle of mouth. Lamellae under fourth toe 21-24 (N 7, mean 22.0). Preanal pores 0-2 on each side.

No nuchal crest. Dorsals, laterals and ventrals large, subequal in size, moderately strongly keeled. Keels on laterals sharply directed upwards and backwards. No white labial streak or spines.

Dorsal and lateral ground colour reddish or greyish brown. Usually grey vertebral stripe present, about twice as wide as white dorsolateral stripe. Usually ca 8 blackish brown or dark reddish brown cross-bands on back and upper lateral zone, interrupted by longitudinal stripes, no wider at vertebral stripe than at dorsolateral stripe. Occasionally a white line or stripe from orbit to top of ear. Whitish midlateral stripe from base of tail forward nearly to foreleg. Under surface white, except occasionally for three faint grey longitudinal stripes on venter and throat (outer converging on chin).

Paratypes

North-west Division (W.A.): Marandoo mine-site (52703); Marandoo town-site (52737-8); 3 km SE of Turee Creek (25135); Kumarina (23970-3).



Map 2: Map of Western Australia, showing location of specimens of *Diporiphora winneckeii*.

KEY TO WESTERN FORMS
OF *DIPORIPHORA*

- 1 Keels of dorsal scales mainly parallel to
midline 2
Keels of dorsal scales sharply converging on
midline *D. convergens*
- 2 Scales on back not varying much in size 3
Vertebral and paravertebral scales much
smaller than adjacent dorsals *D. albilabris*
- 3 Gular fold present 4
No gular fold 9
- 4 No post-auricular fold, ridge or spines 5
Post-auricular fold, ridge or spine(s) present 7
- 5 Gulars smooth; body and limbs very slender *D. winneckeii*
Gulars keeled; body and limbs not very
slender 6
- 6 A femoral pore present *D. reginae*
No femoral pores *D. valens*
- 7 A femoral pore present *D. bennettii arnhemica*
No femoral pores 8
- 8 Gular fold weak, sometimes broken medially;
keels of posterior laterals converging on
dorsals; dark dorsal cross-bands (when present)
narrow and ill-defined; grey vertebral stripe
(when present) ^{not} much wider than dorsolateral
stripe *D. bennettii bennettii*
Gular fold strong; keels of posterior laterals
parallel to dorsals; dark dorsal cross-bands
(when present) rectangular, clear-cut and as
wide as interspaces; grey vertebral stripe
(when present) ~~not~~ much wider than dorso-
lateral stripe *D. lalliae*
- 9 No post-auricular fold, ridge or spines 10
Post-auricular fold, ridge or spine(s) present 12

- 10 Scapular fold present; mainly brownish above
and white below 11
No scapular fold; mainly green above and
yellow below *D. superba*
- 11 Gulars smooth; body and limbs very slender *D. winneckeii*
Gulars keeled; body and limbs not very
slender *D. pindan*
- 12 Post-auricular fold long and strong *D. magna*
Post-auricular fold short and weak or absent *D. margaretae*

REFERENCES

- HOUSTON, T.F. (1977)—A new species of *Diporiphora* from South Australia and geographic variation in *D. winneckeii* Lucas & Frost (Lacertilia: Agamidae). *Trans. R. Soc. S. Aust.* 101: 199-205.
- STORR, G.M. (1974)—Agamid lizards of the genera *Caimanops*, *Physignathus* and *Diporiphora* in Western Australia and Northern Territory. *Rec. West. Aust. Mus.* 3: 121-146.

INSTRUCTIONS TO AUTHORS

Manuscripts

Manuscripts must be submitted in duplicate, typewritten, double spaced with wide margins. Positions of text figures and tables must be indicated. Authors may include an abstract for publication as part of a paper. The Committee may require an author to submit an abstract if no abstract is submitted and it considers that an abstract would be useful.

Illustrations

Papers may be illustrated by black and white line drawings or black and white photographs. One set of illustrations will be required. Photographs should be printed on white glossy paper, showing a full range of tones and good contrast. Top and bottom should be clearly indicated. Line drawings should be no more than three times the maximum size for publication, which is 19 cm x 12.5 cm, including caption. Authors should indicate their preferred degree of reduction. Numbering and lettering should be done lightly in blue pencil. Composite illustrations are to be submitted separately, with a sketch of authors' requirements. Final illustrations will be produced by the Western Australian Museum's display artists.

Footnotes

Footnotes should be avoided whenever possible. Essential footnotes, indicated by superscript figures in the text, should be inserted immediately below the reference and should be separated from it by a line drawn across the top and bottom of the footnote and extending the width of the page.

Style

Authors are advised to follow the Australian Government Printing Office *Style Manual*. The *Records* Committee may approve departures from the *Style Manual* if a case is made that some particular form is inappropriate in a particular work.

References

Authors' names and dates of publication given in text; full references at end of paper in alphabetical order of authors' names. References at end of paper must be given in this order: Name of author, in capitals, followed by initials; names of joint authors connected by "&", not "and". Year of publication in parentheses; several papers by the same author in one year designated by suffixes a, b, etc. Full title of paper; initial capital letters only for first word and for proper names (except in German). Title of journal, if abbreviated, to be according to *World list of scientific periodicals* and underlined (italics). Series number, if any, in parentheses, e.g. (3), (n.s.), (B). Volume number in arabic numerals (without prefix "vol"), with wavy underlining (bold type). Part number, only if separate parts of one volume are independently numbered. In such cases part number is given, in parentheses, after the volume number. Page numbers, first and last, preceded by a colon (without prefix "p"). Thus:

SMITH, A.B. (1956)—New *Plonia* species from Western Australia. *Ann. Mag. nat. Hist.* (12) 9: 937-945.

A reference to a book not forming part of a series should contain the following information in this order: name of author in capitals, followed by initials; year of publication in parentheses; title, underlined; edition, if any; volume number, if any, in arabic numerals, with wavy underlining; place of publication, name of publisher. Thus:

BROWN, X.Y. ed. (1953)—*Marine faunas*. 2nd ed. 2. London: Green.

When reference is made of a work forming a distinct part (such as a chapter or an appendix of a book by another author, or editor, give: name of author of paper, his initials; date of publication; title of paper; "In", underlined; name of author (or editor) of book; his initials; title of book, underlined; edition, if any; volume number, if any; in arabic numerals, with wavy underlining; pagination of paper; place of publication; name of publisher. Thus:

SMITH, C.D. (1954)—Western Australian *plonias*. In Brown, X.Y. *Marine faunas*. 2nd ed. 3: 63-95. London: Green.

Free copies to Authors

Thirty free off-prints of each paper published in the *Records* shall be provided to each author.

CONTENTS

	Page
ADAM, W.	
The Sepiidae (Cephalopoda, Decapoda) in the collections of the Western Australian Museum	109
WILLIAMS, W.D.	
Notes on the freshwater fauna of north- western Australia, especially the Kimberleys	213
BALME, J.	
Artificial bias in a sample of kangaroo incisors from Devil's Lair, Western Australia	229
CLEVERLY, W.H.	
Broad oval australite core from Muntadgin, Western Australia	245
STORR, G.M.	
Two new <i>Diporiphora</i> (Lacertilia, Agamidae) from Western Australia	255