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A REVIEW OF THE GECKO GENUS PTENOPUS WITH THE DESCRIPTION OF A NEW SPECIES

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Die Gecko-genus *Ptenopus* is hersien, en 'n nuwe soort, *P.carpi*, word beskryf. Talle etologiese en ekologiese waarnemings is aangeteken. Die werk is gebaseer op uitgebreide versamelings gemaak gedurende die Carp-Transvaalmuseum-ekspedisie na die Namibwoestyn (1959) en vroeëre ekspedisies in Suidwes-Afrika. Die tipeeksemplare is versamel op die terrein van die Woestynnavorsingstasie by Gobabeb. Alle tipe-eksemplare is in die Transvaalmuseum, Pretoria.

Die Einteilung der Gecko-Gattung *Ptenopus* wird revidiert und eine neue Art, *P.carpi*, beschrieben. Zahlreiche ethologische und ökologische Beobachtungen sind vermerkt. Die Arbeit grundet sich auf die umfangreichen Sammlungen der Carp-Transvaalmuseum-Expedition in die Wüste Namib (1959) sowie früherer Expeditionen nach Südwestafrika. Die gesammelten Exemplare wurden auf dem Gelände der Wüstenforschungsstation in Gobabeb gefunden. Alle gesammelten Stücke sind im Transvaalmuseum in Pretoria.

INTRODUCTION

Geckos of the genus *Ptenopus* are unique among South African lizards for their well-developed ability to produce sounds; their loud and penetrating calls can be heard from a considerable distance. The genus is endemic to Southern Africa and is restricted to the dry, sandy areas where the rainfall is usually well below 20 inches per annum. For many years it was thought that a single species, *garrulus*, existed and that it could be split into two races. In the course of the Carp-Transvaal Museum Namib Desert Expedition, however, some time was spent at Gobabeb, the site of the proposed Desert Research Station, and a large collection of whistling geckos was made there. It was found that these specimens were easily divisible into two distinct species; in the course of describing the new species it seemed desirable to review the whole genus and to examine as many specimens as possible. This has been done and the results are presented below.

GENUS: PTENOPUS

1865, Gray. Proc. Zool. Soc. Lond. p. 640, pl. XXXVIII, fig. 1, (type *maculatus*).

DIAGNOSIS:

Upper extra-brillar fringe well-developed, lower distinct; almost connivent. Pupil vertical. Digits, long, slender and free, strongly clawed. Fingers fringed laterally with spinose scales, toes fringed with combs of long spinose scales. Body lepidosis of small, subequal and smooth granules or scales. Tail cylindrical and tapering. Pre-anal and femoral pores absent. Post-anal sacs present.

RANGE:

Northern Cape Province, extending into Bechuanaland, Northern Transvaal and South West Africa. Endemic to Southern Africa.

TAXONOMIC HISTORY:

A. Smith (1849) described a specimen from "the sandy districts of the interior of Southern Africa" as *Stenodactylus garrulus*. In 1865 a specimen from Damara-land was described as *Ptenopus maculatus* by Gray and was placed in the family Agamidae. During the same year Gunther (1865) synonymised *maculatus* and *garrulus*. Three years later, Cope (1868) pointed out that, on osteological grounds, *Ptenopus* should be removed from the Agamidae and placed in the Gekkonidae. FitzSimons (1935) revived *maculatus* as a subspecies of *P. garrulus*. The evidence presented in this review suggests that the differences between *garrulus* and *maculatus*, viewed in a long series, do not warrant subspecific status. A new species, *P. carpi*, however, is described from the Central Namib Desert of South West Africa.

KEY TO SPECIES:

Limbs relatively short (see measurements); toes strongly fringed laterally (Plate 1d); lower labials 6—10, mean 8; nostril partly closed by sand-catching device peritoneal lining pigmented and black; apparently restricted to a sandy habitat.

. . . *P.garrulus*

Limbs long and slender (see measurements); toes weakly fringed laterally (Plate 1e); lower labials 9—14, mean 12; nostril fully open; peritoneal lining unpigmented; apparently restricted to a gravelly substrate.

. . . *P.carpi*

PTENOPUS GARRULUS (Smith)

SYNONYMY:

1849 *Stenodactylus garrulus* A. Smith, p. 6.

1865 *Stenodactylus garrulus* Gunther, (not Gray), p. 149.

1865 *Ptenopus maculatus* Gray, p. 640.

1885 *Ptenopus garrulus* Boulenger, p. 15.

1935 *Ptenopus garrulus garrulus* FitzSimons, p. 524.

1935 *Ptenopus garrulus maculatus* FitzSimons, p. 525.

TYPES:

All are in the British Museum (Nat. Hist.).

COMMON NAMES:

Whistling gecko, Klein grondgeitjie (Afrikaans).

DESCRIPTION:

A squat, somewhat stout ground gecko; limbs well-developed. Head swollen posteriorly, snout usually blunt but profile somewhat variable (Plate 1a).

Upper labials 6—9, mean 8 (sample 112 specimens). Lower labials 6—10, mean 8 (sample 112 specimens). Nostril usually surrounded by 2 nasals (sample 114 specimens; 109 individuals with 2 nasals, 4 with 3 and 1 with imperfect separation between 2); smaller nasal partly obstructing nostril internally (Fig. 1a). Nasals usually separated above rostral by one granule, rarely 2 or 3. Pupil vertical; upper brillar fringe well-developed, lower distinct, both almost connivent over spectacle. Ear opening an oblique slit, length less than diameter of orbit. Rostral and mental entire. No distinct chin-shields present.

Lepidosis generally of granular and flattened scales; specialised scales present on head, tail-base and digits. Many scales bearing sensory pits (see below). Toes and fingers fringed laterally with spinose scales, those on the toes being long and comb-like (Plate 1d). Tail cylindrical and tapering, covered with flat juxtaposed scales larger than those on body; apparently dropped at any point along its