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The Present Status of Argentinean Polychrotid Species of the Genus *Pristidactylus* and Description of Its Southernmost Taxon as a New Species

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ABSTRACT.—**A new species of *Pristidactylus* from the southern Patagonian region of Argentina is described. This new species shows peculiar throat coloration in males, a secondary sex character that is unique in this genus. Different character combinations led to the revalidation of *Pristidactylus araucanus* from the basaltic districts of Mendoza and Neuquén, Argentina. The conservative retention of the juvenile pattern in adult females, besides other mensural characters in both sexes, indicates its specific identity relative to *Pristidactylus scapulatus* and *Pristidactylus fasciatus*. General considerations of the evolutionary history of the genus *Pristidactylus* are reviewed and a key to the Argentinean taxa is provided.**

The complex taxonomic history of the South American polychrotid lizards of the genus *Pristidactylus* was summarized by Etheridge and Williams (1985). The Chilean species *Pristidactylus torquatus, Pristidactylus valeriae, Pristidactylus alvaroi,* and *Pristidactylus volcanensis* occur west of the Andean Cordillera (Lamborot and Diaz, 1987). The still-recognized Argentinean species are scattered along the eastern side of the Andes, from the mountains of Cordillera and Precordillera (*Pristidactylus scapulatus*) to the flat dry habitats of the Monte and the Atlantic coast (*Pristidactylus fasciatus*) and on the isolated high, wet, rocky meadows atop the Sierra de la Ventana, in Buenos Aires province (*Pristidactylus casuhatiensis*) and similar environments atop Central Sierras in Córdoba (*Pristidactylus achalensis*; Fig. 1).

The subgeneric taxon *Pristidactylus* was established by Fitzinger (1843) having as a type-species *Leiosaurus fasciatus* Duméril and Bibron

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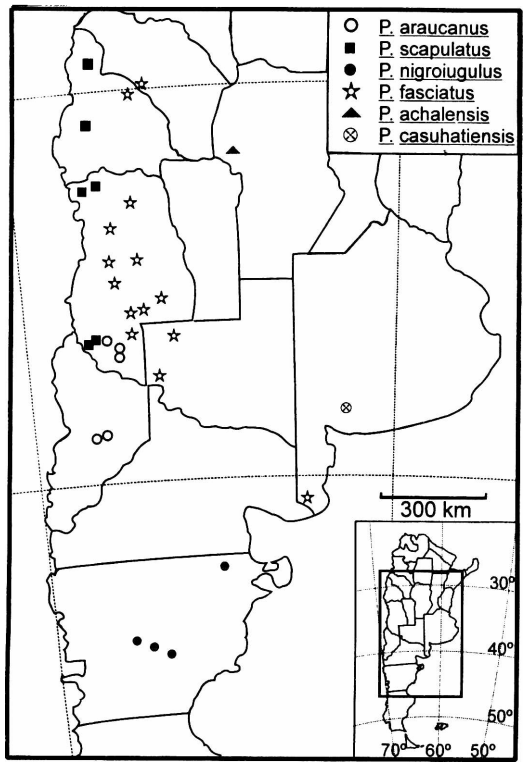

FIG. 1. Distribution map of the species of the genus *Pristidactylus* in Argentina.

1837, a generic name used by Boulenger (1885) only for the species *fasciatus*. The species *scapulatus* was placed in *Leiosaurus* by Burmeister (1861) as well as in *Urostrophus* by Boulenger (1889). However, the synonymy of both genera was supported by Gallardo (1964) within the genus *Cupriguanus*, together with two new species, *achalensis* and *araucanus*. A further taxon, *Cupriguanus casuhatiensis*, was then added by Gallardo (1968), but Etheridge (in Paull et al., 1976) later considered *Cupriguanus* to be a junior synonym of *Pristidactylus* Fitzinger (1843).

As pointed out by Etheridge and Williams (1985), a proper diagnosis of *Pristidactylus* is still wanting, "nor have the species within it been adequately distinguished from one another." A preliminary discussion of osteological and other morphological characters of this genus, as a member of the "anoloid" branch of the iguanians, was provided by Etheridge and Williams (1985). They also took into account its differences from *Leiosaurus, Diplolaemus,* and *Enyalius*. These genera constitute with *Pristidactylus* a subgroup, considered as the sister taxon to the larger group assembly of the remaining anoloid genera, which present three rather than four pairs of sternal ribs.

The recent discovery of a new species of *Pristidactylus* in the southern regions of Argentinean Patagonia (Chubut) requires a general preliminary revision of the different character states and character combinations in all the presently known *Pristidactylus* taxa.

MATERIALS AND METHODS

Measurements of specimens examined were made using dial calipers (0.1-mm accuracy) under a dissecting microscope. Scale terminology follows Smith (1946) and Peters (1964). Head length was measured from inferior apex of external auditory meatus to anterior surface of rostral, and head width was measured across widest part of temporal region. Body length was considered as snout–vent length. Two ratios were considered: head width:head length and snout–nostril distance:eye–nostril distance. A nonparametric analysis of variance by the H-statistic of Kruskall-Wallis with multiple comparisons by the Tukey test (Zar, 1984) was used to determine differences in morphometric ratios among the three species of *Pristidactylus*.

Identification of the specimens analyzed (14 of the new species, 23 of *P. araucanus*, and 13 of *P. scapulatus*) is listed in Appendix 1. Specimens are housed at the following institutions and diagnostic collections, whose abbreviations followed, as far as possible, those suggested by Leviton et al. (1985): MACN: Museo Argentino de Ciencias Naturales, Buenos Aires, Argentina; MHNG: Museum D'Histoire Naturelle de Genève, Switzerland; IBA-UNC: Instituto de Biología Animal, Universidad Nacional de Cuyo, Mendoza, Argentina; MCZ: Museum of Comparative Zoology of Harvard University, Cambridge, Massachusetts, USA; CH-IADIZA: Colección Herpetológica de Instituto Argentino de Investigaciones de Zonas Aridas, Mendoza, Argentina; JAS-DC: José A. Scolaro Diagnostic collection; JMC-DC: José M. Cei Diagnostic collection.

RESULTS

Morphological and Taxonomic Remarks.—An interrupted black collar within the antehumeral fold, a relatively stout body, fully autotomic caudal vertebrae, and marked sexual dichromatism are present in all Argentinean species of *Pristidactylus*. Such sexual dichromatism is also shared with some *Enyalius* from Brazil. Significant differences in lepidosis distinguish Argentinian from Chilean species of *Pristidactylus* (Etheridge and Williams, 1985). Argentinean species are characterized by smaller and more numerous scales, one to three scales interposed between nasal and lateral postrostral, nasal scale well separated from anterior supralabial by one to three scales, largest supraoculars smaller than scales of the supraorbital semicir-

cles at narrowest width of frontal region, eight or more scales arranged in a horizontal line across widest portion of supraorbital region between superciliaries and supraorbital semicircles, and 15 to 25 scales bordering supralabials above.

Juveniles of *Pristidactylus* present a grayish or yellowish background with dark crossbands over the whole body, a peculiar posterior horseshoe-shaped mark on the head, and crossbands on the back laterally constricted. This juvenile pattern is gradually lost and only appears as variable faint traces in adult males, whereas it remains bold in adult females in some southern populations located in basaltic tablelands of Payún (Mendoza), volcanic landscapes of Neuquén and eruptive formations alongside the Chubut River southwards (Fig. 1). The same bold pattern is observed in adult females of *P. achalensis* from Pampa de Achala and Sierra de Comechingones (Córdoba). Adult females only present irregular, scattered spots in northern mountain populations of *P. scapulatus*, whereas in the central and eastern populations of *P. fasciatus* show rough transverse cephalic bands and uneven dorsal bands. The anoloid genus *Diplolaemus* also shows a similar juvenile pattern, quite retained in adult males and females. The hypothesis of a step-clinal variation in the ontogenetic development of such a female morphological condition is considered a doubtful one (Etheridge and Williams, 1985).

The wide latitudinal separation among populations leads to abrupt step-clines in some cases, as Paso del Choique and Payún. No discontinuity is reported for the female retention of the juvenile bold pattern from Payún to the Chubut Valley basaltic outcrops.

Cupriguanus araucanus, suggested by Gallardo (1964) for the populations around Laguna Blanca and other basaltic lagoons, were later synonymized as *Cupriguanus fasciatus* (d'Orbigny) by Barrio (1969), and finally as *Pristidactylus scapulatus* (Burmeister) by Etheridge (in Paull et al., 1976), a status currently accepted by Etheridge and Williams (1985) and Cei (1986). The populations located from the basaltic tablelands of Payún (Mendoza) to the southernmost rocky landscapes of Chubut cannot be considered conspecific with *P. scapulatus*, scattered in high Cordillera northwards (Etheridge and Espinoza, 1997). These populations differ significantly from *P. scapulatus* because of the presence of a juvenile-like female chromatic pattern, a greater diameter at the widest head masseteric width, and a smaller distance nostril-anterior eye corner than the distance nostril–snout tip, in both sexes (Fig. 2). On the basis of the above character combination, the old specific name *araucanus* is available again (Etheridge and Williams, 1985). The taxon *P. araucanus* (Gallardo, 1964) is thus here proposed for the mentioned lizards of the basaltic (Fig. 1).

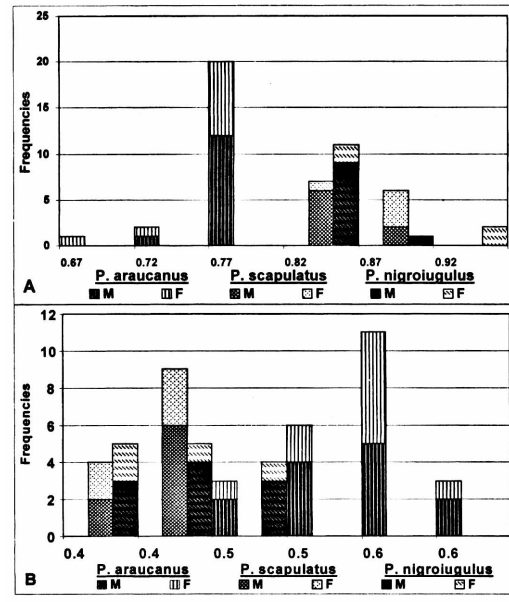

FIG. 2. Frequency distribution of two morphological ratios—(A) head width:head length, and (B) snout–nostril distance:eye–nostril distance—for males (M) and females (F) of *Pristidactylus araucanus*, *Pristidactylus scapulatus*, and *Pristidactylus nigroiugulus*.

Description of the New Patagonian Species.—The scattered populations of Chubut, from Paso de Indios westwards, to Meseta de Canquel and Telsen rocky hills, not far from the Atlantic coast, retain the juvenile bold pattern in females, though acquiring some break up or irregular border. However, such as with the allopatric *P. scapulatus*, they differ from *P. araucanus* by statistically significant meristic characters in head shape in both sexes (Fig. 2). Large adult males of these long-tailed lizards exhibit a striking chromatic character, unique within the genus: a well-defined, large, almost triangular black spot on their whitish throat, laterally joined to the black band or collar within the antehumeral fold (Fig. 3B). This unusual gular spot is a distinctive secondary sexual character, because it increases its extent and color intensity with increasing body size. We believe that the characteristics of the Chubut populations justify its nomenclatural identification at the specific level, easily distinguishable from any other taxon of the genus. It is described below.

Pristidactylus nigroiugulus, sp. nov.
Figure 3

Holotype.—MACN 37092. Adult male: Foothills of the Meseta de Sierra Negra, Telsen, 880 m

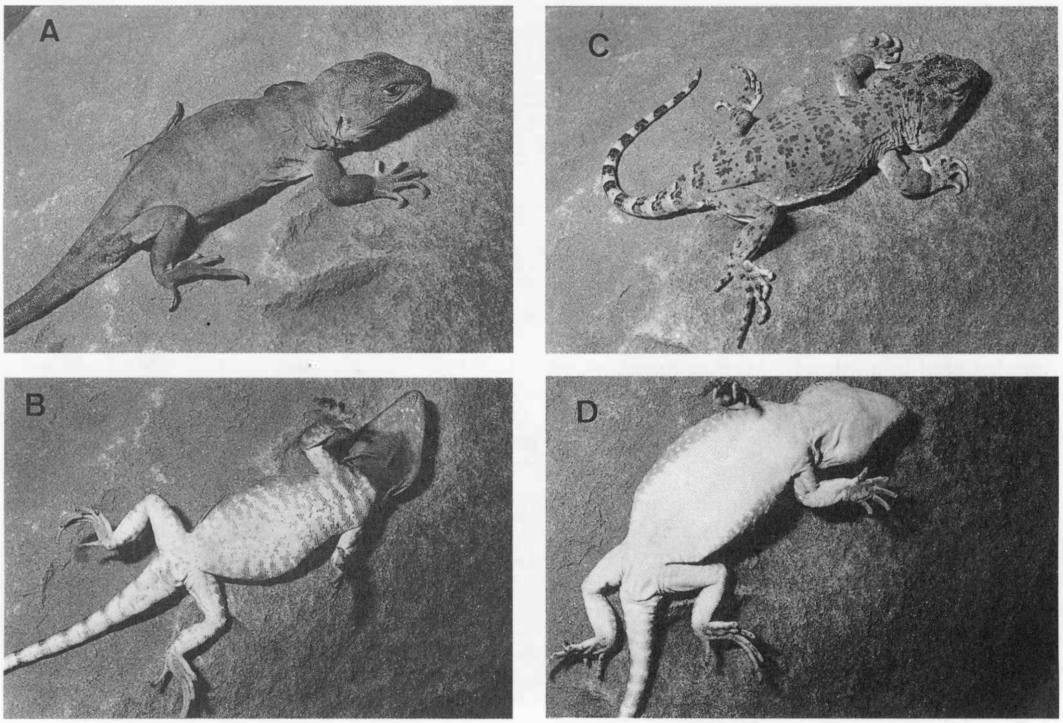

FIG. 3. General aspect of *Pristidactylus nigroiugulus*: (A) dorsal view and (B) ventral view of an adult male, (C) dorsal view, and (D) ventral view of an adult female. Photographed by J. M. Cei.

(Chubut, Argentina), collected on 15 February 1999 by J. A. Scolaro and J. Upton.

Paratypes.—Females: MACN 37093 same data as the Holotype; IBA-UNC 784 Road Sombrero-Paso de Indios (Chubut, Argentina), collected on 15 January 1972 by J. M. Cei, L. Cei, and R. Ferreyra; IBA-UNC 934 Puesto Callejas, Meseta Canquel (Chubut, Argentina), collected on 15 February 1972 by J. M. Cei, L. Cei, and R. Ferreyra; JMC-DC 1197 same data as the Holotype. Males: MHNG 2146-39, 2146-40 Paso de Indios, South of Rio Chubut (Chubut, Argentina), collected on 27 February 1983 by A. Kovacs; MCZ R182882, R182883 same data as the Holotype; IBA-UNC R1477 same data as the Holotype; CH-IADIZA 288, 290 same data as the Holotype; JMC-DC 1196 same data as the Holotype; JAS-DC 594 same data as the Holotype.

Diagnosis.—*Pristidactylus nigroiugulus* is unique within the genus in having a showy black gular spot in males as a secondary sexual character. Moreover, it differs from *P. scapulatus* in retaining the juvenile pattern in adult females; from *P. araucanus* in having distinct morphological characters in both sexes, as a smaller head width at the masseteric region, and a major relative distance between nostril and anterior corner of the eye, when compared with the distance between nostril and tip of the snout; from *P. achalensis* in having the crowns of the posterior marginal teeth tapered with small cusps, not with flared crowns, strongly compressed, with larger anterior and posterior cusps as in *P. achalensis*; from *P. casuhatiensis* in having smooth subdigital scales and a very different chromatic pattern in both sexes; from *P. fasciatus* in having smooth subdigital scales and a very different tail:body ratio, with the tail length in *P. fasciatus* less than the snout–vent distance.

Description of the Holotype.—Head subtriangular and longer than wide, slightly more than one fourth body length. Dorsal head scales smooth, irregular, noticeably larger than dorsal body scales. Rostral twice as wide as high, in contact with six scales and separated from nasal by three scales. Nostril opening lateral in a round nasal scale; in contact with the first smaller scale of the three large canthals, delimiting together with supralabials and suboculars a depressed loreal region of 22 large and 32 small scales. Frontal region with very irregular, somewhat swollen, large scales, in contact with canthals and the polygonal or squared 13–14 large scales of the supraorbital semicircles, separated by a row of diminutive scales. Between ciliaries and supraorbital semicircles five rows of large scales, contacting supraorbital semicircles as a supraorbital disk; these five rows are separated

from the ciliaries by 4–5 rows of diminutive, almost rounded scales. Irregular interparietal, with round parietal eye, bordered by swollen heterogeneous parietals, larger than the neighboring regular scale rows of rounded subimbricate temporals covering the prominent masseteric region. Ear opening enlarged dorso-ventrally, bordered by ovoid scales anteriorly. Postparietal scales diminishing in size on the neck. Twelve supralabials and infralabials. Eyelid granular bordered by small, protruding ciliaries: two enlarged, pointed suboculars, followed by four heavy, swollen, keeled scales. Between suboculars and supralabials three (sometimes four) moderate scale rows. Mental subtriangular as wide as the rostral, in contact with four scales. Gular scales small, granular and smooth, enlarged only in postmental region and centrally on gular fold. Dorsals very small, granular, heterogeneous, decreasing in size laterally: a transverse row of 12–13 dorsal scales contained in 5 mm, near the vertebral region. A medially, interrupted anterior gular fold and a deep, complete gular fold in the antehumeral region. Subimbricate, smooth ventral scales: a row of eight scales contained in 5 mm in the medial ventral region. Scales of the precloacal region and under thighs and tibia smooth and larger than ventrals: scales under forelimbs smaller than ventrals and mostly granular. Scales on the upper forelimbs and thighs large, subimbricate, smooth; on posterior upper forelimbs and hind limbs granular. Scales on upper surface of hand, foot and digits imbricate often indented; ventral surface of digits with smooth lamellae, 29–30 on fourth toes; strong claws at all digits. Tail 1.23 times body length, circular in cross-section: scales smooth, similar to dorsals proximally, squared and increasing distally: on under surface similar to ventrals proximally, increasing squared distally.

Measurements.—In millimeters: snout–vent length 95; tail length 117; head length 25.2; head width 20.2; head height 14.5; forelimb length 36; hind-limb length 57; axilla–groin distance 37.5; snout–nostril distance 3.4; eye–nostril distance 7.

Coloration.—In living specimens mostly a deep green dorsally, almost uniform; in preserved specimens a gray brownish color, pale on the flanks, with faint traces of the juvenile pattern, with transverse darker bands, more evident in preservative. Throat and belly whitish and grayish, with white irregular markings and faint dark pigmentation along the med-ventral line. Faint darker bands on anterior and posterior limb; tail gray-greenish with 18 evident dark rings from cloacal region to the tip. Strikingly evident large, nearly triangular black spot on the throat, a character unique in the genus (Figs. 3B, 4A–B). The black spot is broadly connected with the bilateral black collar within the antehumeral fold, through the anterior incomplete gular fold and the antehumeral fold, reaching the anterior region of the chest.

Distribution.—Known from the Paso de Indios region (two adult male specimens: 2146.39 and 2146.40 MHNG), along the rocky embossments of the Chubut River basin, to the basaltic Meseta de Canquel and the Telsen stony hills (1000 m elevation), at about 160 km west of Puerto Madryn (Chubut, Argentina).

Etymology.—From the Latin *niger* or *nigrum* for "black" or "deep dark," and *iugulus* or *iugulum* for "throat." Thus, it means "black throat," the most distinctive feature of the lizard.

Variation.—The remarkable dichromatism of this species and the conservative juvenile pattern of the female are noted in the following description of variation and in the key. The general female background is dorsally grayish or brownish, ventrally whitish: the dark banded pattern on dorsum and the characteristic horseshoe-shaped markings on the cephalic region are pointed out in Figure 3C–D.

A remarkably variable chromatic character of *P. nigroiugulus* is the vestigial pigmentary remains of the juvenile pattern on the back of adult males, above all in immature individuals. In females, the dorsal juvenile pattern of transverse bands may likewise show a variable mode of expression for its more or less spotted crossbands and the horseshoe-shaped markings on the head (Figs. 3C, 4C–D). The long tail has a high number of transverse dark rings. They range from 14–24 (average 18) in *P. nigroiugulus* but from 12–15 in *P. scapulatus* and from 15–17 in *P. achalensis*, being generally 15 in *P. araucanus*. In some adult males, longitudinal faint bands of dark pigmentation can be observed along the median ventral line of the specimen. The tail is significantly shorter in females, often fewer transverse dark rings: their ventral surface may be practically immaculate, with a uniform pale gray shadow on the throat (Fig. 3D), but in some specimens irregularly reticulated grayish markings on belly and throat can be observed. Table 1 compares morphometric characters of the new taxon with *P. araucanus* and *P. scapulatus*. Analysis of variance showed that *P. araucanus* differed significantly from *P. scapulatus* and *P. nigroiugulus* in a lower head width:head length ratio ($H = 23.02$ $P = 0.00001$ for males, $H = 12.55$ $P = 0.001$ for females) and in a higher snout–nostril distance:eye–nostril distance ratio ($H = 16.86$ $P = 0.0002$ for males, $H = 13.44$ $P = 0.001$ for females). Differences in ratios between *P. scapulatus* and *P. nigroiugulus* were not significant.

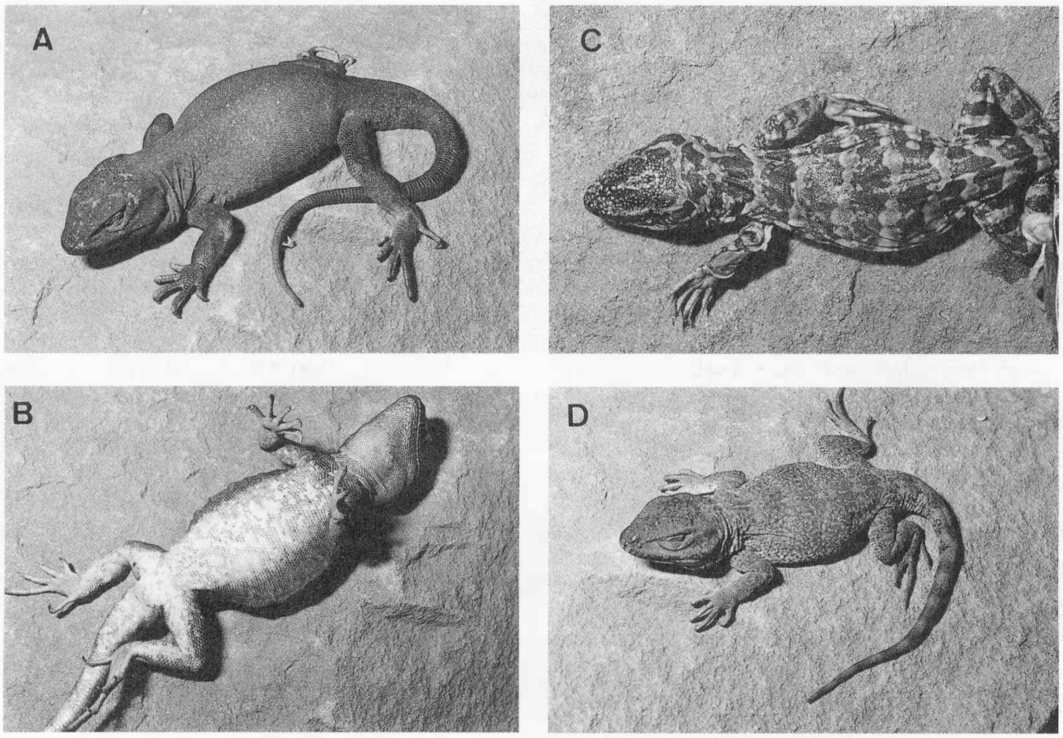

FIG. 4. General aspect of an adult male of *Pristidactylus scapulatus*: (A) dorsal view, (B) ventral view, where is evident the lack of the black spot on throat. Dorsal pattern differences in females: (C) *Pristidactylus araucanus*, with a dark banded dorsal pattern and characteristic horseshoe-shaped markings on cephalic region. (D) *Pristidactylus scapulatus*, with a markedly different dorsal pattern. Photographed by J. M. Cei.

Natural History.—*Pristidactylus nigroiugulus* was found at 880 m elevation, on a basaltic plateau derived from volcanic activity. This typical arid zone of Patagonia shows a high ecotonal environment, dominated by herbaceous steppe of *Stipa* spp. The isolated shrubs mainly belong to *Senecio* sp., *Nassauvia glomerulosa* and *Atriplex lampa*. This very secretive species was observed active only in late summer. Mean temperatures for this season are 20°C to 22°C, ranging from 7°C to 37°C as absolute values. The lizards shelter in holes under large stones or in abandoned rodent burrows. Other lizards present in this zone are *Diplolaemus darwini* and *Liolaemus rothi*.

DISCUSSION

The disjunct distribution of the trans-Cordillera and cis-Cordillera assemblages of recognized species of *Pristidactylus*, as well as their morpho-ecological trends, are suggestive of some preterite evolutionary process from ancestral, likely primitive forest dwellers of more equable austral continental areas, prior to the Andean Plio-Pleistocenic orogenetic crisis. That is in agreement with the relictual forest habitat—*Notophagus* and *Chusquea* woodlands—mainly refuges of the long-tailed Chilean taxa such as *P. torquatus*, *P. valeriae*, and, to a certain extent, *P. alvaroi*. No Argentinean cis-Cordilleran species live in such biocenotic formations, being all rock dwellers, adapted to open, dry and shrubby environments, even to sandy or subdesertic communities as *P. fasciatus*. The discovery of a Chilean species living in open, rocky arid habitat—*Pristidactylus volcanensis* Lamborot and Diaz, 1987, from the Cajón del Maipo, El Volcán (Andean range, 1416 m elevation, 60 km southeast of Santiago)—is an exceptional finding. Its strikingly different habitat and biology, as compared with other Chilean species, could provide a seductive example of the so-called vanishing refuge model, as a mechanism for eco-geographic speciation (Vanzolini and Williams, 1981). In accordance with Lamborot and Diaz (1987), we hypothesize "that the ancestors of *P. volcanensis* could have evolved in a past refugium of forest that has been continuously deteriorating overtime (by increasing aridity, human intervention, etc.), and have had the alternative of adaptation to open, rocky, arid formations."

If applied to the evolutionary history of the Argentinean taxa in their cis-Cordilleran range, this hypothesized model of speciation may sug-

TABLE 1. Comparison of measurements (millimeters) and ratios of three species of the genus *Pristidactylus*. Abbreviations: SVL (snout–vent length), HL (head length), HW (head width), FLL (forelimb length), HLL (hindlimb length), SND (snout–nostril distance), END (eye-nostril distance), and TL (tail length). Nm and Nf are the number of males and females analyzed, respectively.

Character	Sexes	*P. araucanus* (Nm = 13, Nf = 10)	*P. scapulatus* (Nm = 8, Nf = 5)	*P. nigroiugulus* (Nm = 10, Nf = 4)
SVL	Males	95.8 ± 5.3 (85.0–103.0)	101.1 ± 4.4 (95.0–110.0)	95.4 ± 4.0 (91.0–102.0)
	Females	92.9 ± 9.2 (74.0–103.0)	90.8 ± 10.6 (75.0–100.0)	87.8 ± 4.6 (81.0–91.0)
HL	Males	27.6 ± 1.2 (24.8–29.5)	27.8 ± 2.1 (24.5–30.5)	25.8 ± 0.7 (24.5–27.0)
	Females	26.1 ± 1.9 (22.0–29.0)	23.9 ± 1.8 (21.5–26.0)	23.0 ± 1.0 (22.0–24.0)
HW	Males	21.3 ± 1.1 (19.0–22.5)	23.5 ± 1.9 (20.0–25.5)	21.3 ± 0.8 (20.0–22.6)
	Females	19.7 ± 1.5 (16.0–21.5)	20.4 ± 1.2 (19.0–22.0)	19.9 ± 2.1 (17.6–22.6)
FLL	Males	36.0 ± 3.4 (29.5–40.0)	37.6 ± 2.8 (33.5–41.0)	34.7 ± 1.3 (32.0–37.0)
	Females	33.6 ± 3.6 (25.5–37.0)	31.9 ± 2.3 (29.0–34.5)	31.1 ± 2.2 (28.0–33.0)
HLL	Males	58.0 ± 4.7 (49.5–64.0)	59.7 ± 3.0 (54.0–64.0)	57.6 ± 1.3 (56.0 ± 62.0)
	Females	54.3 ± 5.7 (41.0–60.0)	53.3 ± 1.8 (51.5–55.0)	51.5 ± 4.1 (45.6–55.0)
SND	Males	4.1 ± 0.2 (3.6–4.5)	3.7 ± 0.4 (3.0–4.0)	3.3 ± 0.3 (3.0–4.0)
	Females	4.4 ± 0.5 (3.6–5.0)	3.2 ± 0.5 (2.5–3.8)	3.0 ± 0.4 (2.5–3.4)
END	Males	6.9 ± 0.7 (5.6–8.0)	8.0 ± 0.6 (7.0–8.5)	7.1 ± 0.7 (6.0–8.5)
	Females	7.2 ± 0.6 (6.0–8.0)	7.1 ± 1.1 (5.2–8.2)	6.5 ± 0.5 (6.0–7.0)
TL	Males	103.7 ± 11.5 (79.0–113.0)	117.0 ± 11.8 (105.0–134.0)	118.8 ± 4.1 (114.0–124.0)
	Females	100.5 ± 8.4 (86.0–107.0)	84.8 ± 7.4 (79.5–90.0)	99.3 ± 8.5 (90.0–107.0)
HW/HL	Males	0.77 ± 0.02 (0.71–0.79)	0.84 ± 0.03 (0.82–0.90)	0.82 ± 0.02 (0.80–0.87)
	Females	0.75 ± 0.03 (0.69–0.78)	0.85 ± 0.02 (0.83–0.88)	0.87 ± 0.07 (0.80–0.94)
SND/END	Males	0.60 ± 0.05 (0.50–0.67)	0.47 ± 0.02 (0.43–0.49)	0.47 ± 0.03 (0.43–0.50)
	Females	0.61 ± 0.05 (0.50–0.67)	0.45 ± 0.04 (0.40 ± 0.48)	0.46 ± 0.04 (0.42–0.50)

gest an interesting interpretation of the present scattered distribution of species as *P. scapulatus*, whose isolated Andean populations are now no longer in contact, or *P. araucanus* and *P. nigroiugulus*, similarly distributed in a chain of discontinuous populations showing a peculiar retention of the bold juvenile pattern in females. This population chain is apparently related to basaltic or volcanic landscapes, which break up the relictual remains of the previous *Notophagus*, *Chusquea*, or *Araucaria* forest. Extreme examples of a nearly irreversible reduction of ancient temperate forest formations and of a remarkable restricted adaptation to climatic and biocenotic changes may be pointed out, moreover, within the almost "insular" habitats of *P. achalensis* and *P. casuhatiensis*, in the wet, brushy, stony biotope of Pampa de Achala (Sierras de Córdoba) and Sierra de la Ventana (Buenos Aires province), respectively.

The peculiar chromatic sexual dimorphism of *P. nigroiugulus* from Chubut appears to vary with male age (size). Comparative examination of adult and juvenile male specimens of lizards from Chubut indicates ontogenetic variation in the development of the intense black gular spot.

Gorman et al. (1967) reported 2N = 36 (12M + 24m) as the karyotypic number for the genus

Pristidactylus. This diploid number seems stable among species from Chile: *P. volcanensis* (Lamborot and Diaz, 1987), *P. torquatus* and *P. valeriae* (Navarro and Veloso, unpubl. fide E. Pereyra, pers. comm.), as well as from Argentina: *P. achalensis* (Pinna-Senn et al., 1987), *P. scapulatus* and *P. nigroiugulus* (E. Pereyra unpubl.).

KEY TO ARGENTINEAN SPECIES OF *Pristidactylus*

1a. Subdigital scales distinctly multicarinate; tail length less than body length ..... *fasciatus*
1b. Subdigital scales smooth or with one or two weak keels; tail length greater than body length 2
2a. Subdigital scales with one or two weak keels; crowns of posterior marginal teeth somewhat swollen, anterior and posterior cups absent or faintly indicated; adult male dorsal pattern showing almost regular dark reticulation on green background and reddish flanks .... *casuhatiensis*
2b. Subdigital scales smooth; crowns of posterior marginal teeth slightly compressed, anterior and posterior cusps moderate but distinctly present; adult male dorsal pattern nearly uniform, without spots or reticulations 3
3a. Crowns of posterior marginal teeth flared; somewhat compressed, anterior and posterior cusps larger; adult males uniform green or yellow-green dorsally ..... *achalensis*
3b. Crowns of posterior marginal teeth tapered, very slightly compressed, with small anterior and posterior cusps; adult males green or brownish-green dorsally, uniform or nearly uniform 4
4a. Adult males almost uniform dorsally; adult females with dorsal cross bars very faint or almost indistinctly bordered, broken into scattered dark spots or puntuated; no distinct horse-shoe shaped marks on female head ... *scapulatus*
4b. Male and female dorsal and cephalic pattern not as above 5
5a. Male dorsal pattern nearly uniform, laterally slightly reticulated, with whitish points; masseteric region wider in both sexes (head width: head length ratio usually less than 0.80); snout–nostril distance:eye–nostril distance ratio usually more than 0.50 in both sexes; adult female dorsal pattern with distinct transverse dark bands and conspicuous dark horseshoe-shaped marks across the head; gular and ventral region whitish or pale grayish or scattered with small marks in both sexes ..... *araucanus*
5b. Male dorsal pattern green or brownish green, without lateral markings; masseteric region narrower in both sexes (head width:head length ratio usually greater than 0.80); snout–nostril distance:eye–nostril distance ratio usually less than 0.50 in both sexes; adult female dorsal pattern with transverse indented dark bands, often broken into regular bands of dark dots, and recognizable dark horseshoe-shaped marks across the head; remains of transverse banded juvenile pattern distinguishable in preserved adult males; ventrally whitish, but a striking nearly triangular black spot in the throat of the males ..... *nigroiugulus*

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APPENDIX 1

SPECIMENS EXAMINED ARE FOLLOWED BY LOCALITY AND MUSEUM NUMBERS.

Pristidactylus nigroiugulus.—Males: Paso de Indios (Chubut, Argentina) MHNG 2146-39, 2146-40, Telsen (Chubut, Argentina) CH-IADIZA 288, 290, JMC-DC 1196, MCZ R182882, R182883, IBA-UNC R1477, MACN 37092, JAS-DC 594. Females: road Sombrero-Paso de Indios (Chubut, Argentina) IBA-UNC 784, Puesto Callejas (Meseta Canquel, Chubut, Argentina) IBA-UNC 934, Telsen (Chubut, Argentina) MACN 37093, JMC-DC 1197.

Pristidactylus araucanus.—Males: La Payunia (Malargüe, Mendoza, Argentina) IBA-UNC 1012-1,2,4,5,6,11, 727-1,3, 782-3, 775-1. Laguna Blanca (Zapala, Neuquén, Argentina) MACN 17702, 17704, 17705. Females: La Payunia (Malargüe, Mendoza, Argentina) IBA-UNC 727-2,4, 782-1,2,5, 775-2,3, Laguna Blanca (Zapala, Neuquén, Argentina) IBA-UNC 790, MACN 17703, 17706.

Pristidactylus scapulatus.—Males: Uspallata (Las Heras, Mendoza, Argentina) IBA-UNC 465-1, 578-1, JMC-DC 1195, CH-IADIZA 292, 293, Cuesta del Choique (Malargüe, Mendoza, Argentina) IBA-UNC 1013-1,2,3. Females: Uspallata (Las Heras, Mendoza, Argentina) IBA-UNC 465-2, 578-2, Casa de Piedra (Las Heras, Mendoza, Argentina) JMC-DC 4, Pampa Canota (Las Heras, Mendoza, Argentina) CH-IADIZA 291, 122.