

THE SOUTHERNMOST POPULATION OF ELAPOMORPHUS BILINEATUS IN ARGENTINE PATAGONIA - The genus Elapomorphus comprises about nine species, most of them occurring in the eastern tropical and subtropical regions of Brazil. Only E.bilineatus Duméril, Bibron and Duméril, and E.tricolor Duméril, Bibron and Duméril extend into the Chacoan lowlands and the Paraná basin southward. They are also members of the Argentine herpetofauna, together with the poorly known, localised E.bollei Mertens from the granitic mountains of Tandil, Buenos Aires province. The low taxonomic reliability of this genus was pointed out by Peters and Orejas Miranda (1970). Most of its forms need a suitable revision and E.bilineatus is a polytypic taxon, where eight formerly described species are included. Four of them (reticulatus, ihoringsi, melanoleurus, trilineatus) have been reported for Eastern Brazilian territories, one generically described for "Amérique du Sud" (immissatus), three for Argentine regions (bilineatus, spazzinii, suspectus). The scattered distribution of these unusual, fossorial snakes increases difficulties in collecting and revising. Several Argentine localities have been registered through the revision of the literature and by personal communications of Musaeological Institutions. Among them we can report Corrientes (terra typica), Tucumán, Córdoba, San Luis, La Plata, Rio Atuel in the south-eastern Mendoza province, and Sierras de La Ventana in the southern Buenos Aires province. The latter was the southernmost locality yet observed, at about 38° South latitude (Gallardo, 1970).

On 23-26 July 1976, a new austral population of E.bilineatus was discovered near Muerto Madryn, Chubut, in the coastal Patagonian range of Argentina, at about 42° 30' South latitude.

Three adult specimens, two males (IBA-UNC,1225:1-2) and a female (IBA-UNC,1225:3) were collected in a open sandy area, covered by dry-resistant grass (Stipa,Poa) and scattered with the low bushes of the ecotonal Monte-Patagonian association, such as Atriplex, Larrea, Lycium, Chuquiraga, Prosopis, Prosopidastrum, Suaeda, Schinus, Erodium, Hoffmanseggia. The animals were found by the senior author underground, in deep galleries of the largest nests of Acromyrmex, a neotropical genus of leaf-cutting ants, at a depth of 0.80-1.00 meters.

The colubrid snake Pseudotomodon trigonatus (Keybold) was also collected in the same nests. Southernmost species of Acromyrmex built a promontory shaped nest above the ground, which is covered with a thick mantle of fallen leaves and branches. In winter season such a layer of organic matter is a very efficient shelter against low environmental temperatures, often below 0°C. Elapomorphus takes advantages of this natural support, its specimens having been found only in the galleries under projecting mantles of fallen leaves. The Patagonian specimens of Elapomorphus bilineatus are light fossorial ophidians, sticking quickly into the sandy soil in captivity, and probably feeding on worms and small arthropods in their natural environments. A repugnant smell is delivered by their conspicuous pericloacal glands, when seized or frightened.

These southernmost Elapomorphus agree for their characters with the holotype and the original description of E. bilineatus from Corrientes (Duméril and Bibron, 1854). The total length of the males is 337-342 mm, being the tail length 32 mm. The total length of the female is 368 mm, being its tail length 25 mm. All the individuals present 15 scale rows at the middle of the body; ventral scales are 207-218 in males, 223 in the female; subcaudal scales are respectively 33-32 and 25. No morphological or color sex differences were observed (fig. 1, A-B).

The extreme individual variation of E.lemniscatus, synonym of E.bilineatus, was first pointed out by Boulenger (1885) on Brazilian, Uruguayan and Argentine specimens. Our available Patagonian specimens are all quite identical. Their dorsal and ventral color patterns are similar to that observed in specimens from Tucumán, but they differ from color patterns of specimens from Atuel River (San Rafael, Southern Mendoza province), which lack black ring on the anal region, black lateral stripes and distinct rectangular dark spots on ventral scales. On the contrary the "spazzini" form from BarPinta neighborhoods, and the "suspectus" form from Cordoba show heavy pigmented ventral scales and broader black lateral stripes. The lateral and ventral pigmentation appears also more evident in specimens from Montevideo and Rio Grande do Sul, Brazil. Whereas the yellowish occipital cross-bar, black-bordered posteriorly, is of about three scales wide in the Puerto Madryn and Rio Atuel specimens, it is narrower in the Tucumán, San Luis and Cordoba specimens, finally lacking in the holotype and in the "spazzini" form. On the other hand the "spazzini" form differs from the nearby related populations of Montevideo, in which the yellowish cross-bar on two scale rows of the occiput is evident. The available samples of E.bilineatus are yet scarce for a significant statistical analysis of the geographical variation. However, in spite of the unquestionable individual variation stressed by Boulenger, a group of eastern heavy pigmented but narrowly collared populations, and a western group of light pigmented, distinctly collared populations can be probably suggested.

The presence in the actual Patagonian range of a subtropical snake such as Elapomorphus bilineatus, and its ecology, stress its biogeographical interest. It is probably a relic of

the ancient subtropical ecosystems, or Chacoan Paleoflora, prior to the dramatic environment changes of the climatic Pleistocenic crisis (Solbrig, 1976). The specialized fossorial habits and its association with the large underground communities of the Attini, must have been playing a decisive role in its preservation, probably in the milder coastal biotope such as the relatively sheltered, sandy neighborhood of Puerto Madryn today.

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