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## TWO NOTES ON *ANOTOSAURA* (SAURIA, TEIIDAE)

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### ABSTRACT

*Anotosaura collaris vanzolinia* Dixon, 1974 is raised to species rank. A melanistic specimen of *A. brachylepis* is discussed.

Dixon (1974), reviewing *Anotosaura*, redescribed the type of the genus, *A. collaris*, and described as new *A. collaris vanzolinia* and *A. brachylepis*.

### STATUS OF *A. c. vanzolinia*

In the course of a study of the distribution of some microteiid genera I was led to consider the relationships between *A. c. collaris* and *A. c. vanzolinia*.

I am much impressed by some qualitative differences between them, all in fact duly noted and illustrated (but not given the same weight I do) by Dixon (loc. cit.).

The anterior half of the top of the head differs markedly in the two forms. Prefrontals are present in *collaris* and absent in *vanzolinia*. The frontal of *vanzolinia* is very broad, and has a short anterolateral facet that meets fully the first supraocular; thus, the line formed by the medial margins of the supraoculars is not a smooth convex curve as in *collaris*, but zig-zags very noticeably. This peculiarity cannot be directly attributed to the absence of the prefrontals.

The limbs and digits of *collaris* are slender; those of *vanzolinia* very stubby. The morphology of the hind feet is strikingly different: in *collaris* the longest toe is the third, in *vanzolinia* by far the fourth. The hallux is differently implanted: in *collaris* it is set more distally, and the dorsal tarsal scale at its base is on a level with two others, corresponding to the second plus third and to the fourth toes. In *vanzolinia* the hallux is set more proximally, and the scale at its base is not part of the distal row of dorsal tarsals, which is composed of only two very broad scales (I feel Dixon's figure understresses somewhat this feature in *vanzolinia*).

I do not think these differences (with the exception of the presence or absence of prefrontals) are the type that lend themselves to intergradation; this applies especially to the anatomy of the foot, because two entirely different mechanical schemes are involved. Thus, and appealing also to analogy with other microteiids of which I have seen good series, I prefer to raise *vanzolinia* to the rank of species.

This is of course a judgment based on probability, but to me it becomes mandatory because of the implications of the subspecies concept. If we call *vanzolinia* a subspecies of *collaris*, we are saying implicitly that: (i) their ranges meet; (ii) the characters of each form are fairly constant over a large part of its range, and (iii) the characters in which they differ intergrade across a reasonably narrow belt.

I think this is too much to assume on the basis of the available evidence, and against the grain of analogy. In fact, the subspecies concept is so loaded with meaning that I believe it should only be used when made inescapable by the nature of the evidence and the sufficiency of the materials.

The zoogeographical consequences of raising *A. c. vanzolinia* to the rank of full species will be discussed elsewhere (Vanzolini & Ramos, in prep.).

#### A MELANISTIC SPECIMEN OF *Anotosaura brachylepis*

The holotype of *Anotosaura brachylepis* Dixon, 1974 (in the Museum of Comparative Zoology) was collected on the banks of the rio Capivara (a tributary of the Cipó) on the western slope (ca 1000 m) of the Serra do Cipó, state of Minas Gerais, in January 1973, by Otavio Froehlich. The only paratype (in our collection) was collected at the same place, on 1 July 1972, by Claudio Gilberto Froehlich, not by myself, as mistakenly stated by Dixon (1974: 17). I apologize to Dixon and to Froehlich and avail myself of the opportunity to set the record straight.

On July 15, 1975, Renato L. Araujo, of this Museum, collected inside a termite nest at Capitão Enéas, Minas Gerais, one female that I am identifying as *brachylepis*.

The specimen is 39 mm long, snout to vent. It agrees very well with the paratype in our collection in all characters of squamation, with one small but interesting difference: in the new specimen, the dorsals are slightly longer and more regularly hexagonal, a less extreme condition than that found in the types. The scale counts are also in good agreement (type material within parentheses): dorsals 55 (58-60), ventrals 29 (30-32), midbody 27 (26).

There is, however, a strong difference in ground color: the types are light brown and the present specimen almost black. Otherwise, in spite of the general melanism, the characteristic pattern of fine darker vermiculations is quite evident.

The approximate coordinates of the type locality are 19°13'S, 43°35'W; those of Capitão Enéas 16°19'S, 43°42'W; the distance in straight line between the two localities is about 330 km. Both are in open plant formations, but of very different kinds. East of the Serra do Cipó the general vegetation is cerrado; on the slopes, one finds a highly peculiar vegetation, characterized mostly by Eriocaulaceae and Vellosiaceae (Silveira, 1908:103); at the site of collection the Rio Capivara has ciliary forest, but the specimens were found in the open (C. G. Froehlich, pers. comm.). Capitão Enéas is in a complicate transitional belt, involving mostly interdigitations of caatinga and cerrado (Vanzolini, 1970) and a transitional type of deciduous forest. The actual collecting site was a pasture in the middle of very degraded vegetation.

There is of course also a strong contrast in climate between the two localities. The Serra do Cipó is in an area of abundant rainfall, and is cool, being high. Capitão Enéas experiences a much hotter, drier and more irregular climate (data on the climate can be found in Galvão & Nimer, 1965).

In speculating about the significance of the melanistic specimen, these ecological differences should of course be taken into account. If the lizard had been collected at the Serra do Cipó, the more economical hypotheses would be that *A. brachylepis* varies from light to melanistic, or else has two color phases. However, given the distance between the localities, the possibilities cover the full spectrum. On one end, the hypotheses above could be true, i.e., *brachylepis* would have melanistic specimens as extremes of variation or color phases, and we just happened to obtain the two types at different places. Proceeding through ecotypes, subspecies, etc., we'd reach the other end of the spectrum: two good allopatric sibling species.

Three specimens from two localities do not afford sufficient inductive basis for a decision, but the environmental aspects indicate that the case very possibly is one of geographic differentiation related to climate. The zoogeographical aspects of the problem will be pursued in further detail in the paper mentioned above about *vanzolinia* (Vanzolini & Ramos, in prep.).

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