ON OPHIOGNOMON TRISANALE AND ABENDROTHII
(SAURIA, TEIIDAE)

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Some years ago the Departamento de Zoologia received a small but extremely interesting collection of reptiles and amphibians assembled by Dr. H. Schultz, of the Museu Paulista, on the Upper Purus. Among other interesting specimens there was a small teiid which I found difficult to identify and led me to inquire into the relationships of two forms of Ophiognomon, O. trisanale Cope, 1868 and O. abendrothii (Peters, 1871), O. vermiciformis (Cope, 1874) being out of question.

The following description is patterned after the system adopted in my paper on Bachia, in this same volume (Vanzolini, 1961).

DESCRIPTION

DZ 3334, 2, Igarapé Champuia, tributary of the Alto Curaná, of the Upper Purus, Dept. Loreto, Peru. H. Schultz leg. et det.

Rostral high, showing on the dorsal aspect. Frontal very large, hexagonal, with elongate posterior angle. Superciliares 2, supraoculars none. Parietals much longer than frontal; interparietal absent. Supralabials 5, the 3 anterior ones low, the fourth high, meeting the parietal. Preocular square, reaching the top of the head. Temporals 1 + 2, anterior very large. Symphysal small. Post-symphysial hexagonal, large. Two pairs of enlarged gulars in contact on the midline. Infracorals 3.

Dorsals smooth, subquadrate on the nape, soon changing to elongate, hexagonal, imbricate. Ventrals rectangular, with rounded corners. Annull between cervical groove and hind limb, 48; between limbs, 39. Scales between gulars and interbrachials, 7; between interbrachials and preanals, 37. Scales to a midbody annulus, 24. Preanals 3, on a single transverse row. Pores, 2 on each side, next to the antero-external angle of the preanal plate.

Pore limb small, as long as 2.5 body annuli; dorsal aspect with one basal scale, followed by a pair of smaller and then a pair of
larger ones; on one hand 2 terminal scales, on the other one additional median small scale, all clawless. Hind limb shorter than fore limb, as long as one body annulus, formed by two conical scales.

Tail with 78 + x annuli of regular hexagonal scales.

Head brown (see plate), with two longitudinal light streaks; each streak begins on the parieto-superciliary suture, parallels the outer margin of the parietal and merges with the light band of the back. Two irregular elongate spots on the inner half of the parietals. Lower lips and midthroat sooty. Body “brown, sides darker; a light band, bordered on both sides by a dark line, along each side of the back...; a median dark brown line” (Boulenger, 1886: 421). The median dark brown line is very thin, and disappears on the posterior third of the body. The light bands are 2 scales wide and continue on the tail.

Length 65 + 80 + x mm.

Ophiognomon abendrothii, DZ 3334, Igarapé Champuía, Loreto, Peru: Head, dorsal, lateral and ventral aspects

DISCUSSION

The identification of the present specimen hinges on the relationships between O. trisanale and O. abendrothii. In fact, it agrees closely with the published descriptions of the latter, which is a well-known species, and the problem actually lies on the concept of trisanale, unfortunately the older name.

TYPE LOCALITY OF TRISANALE

A first problem raised by this form is that of its type locality. The type specimen was collected by Orton, during his well-known trip across South America, sponsored by the Smithsonian Institution. In the original description, Cope (1868) mentions the “Napo or Upper Marañon”; in the introduction to the paper he remarks that the most important (in this context) collecting stations in the area were “Archidona” (a misprint for Archidona) and Santa Rosa, on the Napo, and Peñas and Tabatinga, on the Marañon. This intelligence is supported by Orton’s (1870) report of the travel. The only ex-
Exception to Cope's account is his inaccurate use of the expression "Upper" for what is actually the lower Marañón. This has some importance, as the region usually called "Upper Marañón" is a rather arid series of valleys in the Andes of Peru, while Orton travelled through lowland forests much below the Pongo de Manseriche. No *Ophiognomon* has been collected in the former area, but several specimens around the latter.

Thus, we can be perfectly sure that the type of *trisanele* was collected on the banks of the Napo, from Archidona to the mouth, or of the Marañón, from the mouth of the Napo to the Brazilian border, where the river changes its name to Solimões (a fact specifically stated by Orton). Both Cope and Orton (*l.c.*.c.) say that lizards were mostly collected on the Napo localities (Archidona and Santa Rosa).

**Differential diagnosis**

So far, no specimen has been found in complete agreement with Cope's description. As the type is not to be found in any of the collections (Philadelphia Academy, U.S. National Museum, American Museum of Natural History, Museum of Comparative Zoology) where it could conceivably be preserved, the original description remains the only source of information on the specimen.
On the contrary, Peters' form is well known from the type series
and from topotypes.

Boulenger (1885: 420-1), based on Cope's description of *trisanale*
and on direct examination of one paratype and 4 topotypes of
*abendrothii*, established the following differential diagnosis.

**TABLE 1**

Differences between *Ophiognomon trisanale* and *abendrothii*
(adapted from Boulenger, 1885)

<table>
<thead>
<tr>
<th>Character</th>
<th>trisanale</th>
<th>abendrothii</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Length of fore limb .........</td>
<td>= 3 anterior labials</td>
<td>shorter</td>
</tr>
<tr>
<td>2. Length of hind limb ..........</td>
<td>1/2 of preanal</td>
<td>minute tubercle</td>
</tr>
<tr>
<td>3. Supralabials ..................</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>4. Scales to a midbody annulus ..</td>
<td>20</td>
<td>26-32</td>
</tr>
<tr>
<td>5. Anuli between limbs ..........</td>
<td>37</td>
<td>40-42</td>
</tr>
<tr>
<td>6. Pairs of gulars in contact ...</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

The first 3 characters are, in my opinion, of little, if any, impor-
tance, and shall be dismissed hereafter. The remaining differences
will be examined with help from the present specimen and data
from Peracca (1897, one specimen from Cononaco) and Burt & Burt
(1931, one specimen from Macas and one from Riobamba). The
pertinent data are shown in Table 2.

**TABLE 2**

Data on the published specimens of *Ophiognomon trisanale* and *abendrothii*

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Locality</th>
<th>Midbody</th>
<th>Anuli between limbs</th>
<th>Pair of gulars in contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burt &amp; Burt (1931) .</td>
<td>Riobamba</td>
<td>24 — 28</td>
<td>37 — 39 (1)</td>
<td>1</td>
</tr>
<tr>
<td>Type of trisanale . . . . .</td>
<td>Macas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peracca (1897) . . . . .</td>
<td>Napo or Upper</td>
<td>30</td>
<td>37</td>
<td>1</td>
</tr>
<tr>
<td>Marañon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Types and topotypes of . . .</td>
<td>Cononaco</td>
<td>26</td>
<td>41</td>
<td>2</td>
</tr>
<tr>
<td>of abendrothii . . .</td>
<td>Sarayacu</td>
<td>26 — 28</td>
<td>40 — 42</td>
<td>2</td>
</tr>
<tr>
<td>Present specimen . . . . .</td>
<td>Ig. Champula</td>
<td>24</td>
<td>39</td>
<td>2</td>
</tr>
</tbody>
</table>

(1) 46-48 from the cervical groove.
SCALES TO A MIDDLE ANNULUS

Cope's specimen is aberrant in this regard. In fact, it is the only character in which the Burts' specimens differ from the original description of *trisanale*.

Considering this and more that such a low count is not associated with any other character in the materials available, three alternative hypotheses become possible:

1. we have here two sympatric species, differing only in the number of scales to a middle annulus.
2. The range of this character is very broad, and not relevant to the present issue.
3. The figure presented by Cope is either a misprint or the result of a mistake in counting.

The first hypothesis seems to me the least probable. It is hard to conceive (outside the proteran genus *Anolis*) two sympatric species so closely related. The second alternative is more likely than the first, but I am more inclined to believe into a mistake, in spite of the present impossibility of checking it. I fear these animals are too slender for Cope's standards of accuracy.

Nevertheless, it is impossible to ignore the possibility of two sympatric species differing in the number of scales to a middle annulus. Keeping this in mind, we shall proceed on the assumption that either a mistake has been made or that the range of the character encompasses Cope's figure, both hypotheses having the same practical import.

ANNULI AND GULARS

Inspection of Table 2 shows that the specimens with only one pair of gulars in contact very definitely tend to have lower annuli counts, but that there is a degree of overlap.

This immediately suggests the possibility of subspecific differentiation. An examination of the map shows that the southern specimens (from Sarayacu and Igarapé Champaña) definitely have high counts and two pairs of gulars in contact. The 3 northern specimens with definite localities are mixed: those from the Andean foothills (Ribamba and Macas) have low counts and the *trisanale* condition of the gulars. Peracca's specimen from Cononaco, on the lowlands, agrees with the southern specimens.

If Cope's type comes from the Upper Napo, we could have a northwestern race (*trisanale*) on the hills and a much more widespread one (*abendrothii*), on the lowlands from the middle Napo to the upper Purus.

If, on the contrary, Cope's type locality is the lower Napo or the Marañón, three hypotheses are plausible: a) there are two races with a broad belt of intergradation; b) there are two distinct sympatric species; c) there is only one species, the patterns indicated by the present materials being but accidents of sampling.
CONCLUSION

It seems clear that, at present, both names, *trisanale* and *abendrothii*, should be kept. It would be rash to do as O'Shaughnessy (1873), bluntly and unsupportedly stating that both forms are synonyms, or as Peracca (1897), identifying as *trisanale* one specimen which, on the standards here proposed, should be called *abendrothii* (although it should be said, in fairness to Peracca, that his discussion is quite lucid).

Further study of the group should be directed towards an investigation of geographical differentiation, based on simultaneous examination of all available specimens, in order to extract maximum information from scale counts which may differ by a rather small amount and to obtain good estimates of the frequency of the gular conditions, as well as to take into account characters which have possibly been neglected.

SUMÁRIO

As relações entre *O. trisanale* e *abendrothii* são examinadas à luz da descrição original de Cope (cujo tipo não se encontra), dos exemplares citados na literatura e de um novo espécime obtido no Igapó Chimpua, muito ao sul da área conhecida para o gênero.

Conclui-se que os nomes *trisanale* e *abendrothii* devem ser mantidos até que se possa fazer uma análise adequada da diferenciação geográfica do grupo.

LIST OF REFERENCES


*Ophiognomon abendrothii*, DZ 3334, Igarapé Champuia, Loreto, Peru:
Head, dorsal aspect