A NEW SPECIES OF OCHOHRISTICA (EUCESTODA: CYCLOPHYLLIDEA) PARASITE OF CTENOSAURA PECTINATA (REPTILIA: IGUANIDAE) FROM OAXACA, MEXICO

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ABSTRACT: During January 2002, 3 specimens of an undescribed species of Ochohristica Lühe, 1898, were collected in Ctenosaura pectinata (Wiegmann, 1834) from Santa María Mixtequilla, Oaxaca, Mexico. Ochohristica leonregagnonae n. sp. differs from 71 of 82 species of the genus by its large number of testes (78–112 [95] vs. less than 65 per proglottid, respectively). In addition, the numerous ovarian lobes (31–79 [51]) possessed by the new species distinguish it from the other 10, with a maximum of 20 ovarian lobes. The new species differs from Ochohristica acapulcoensis Brooks, Pérez-Ponce de León and García-Prieto, 1999, which also infects C. pectinata in Mexico, by the presence of numerous staining granules throughout the parenchyma of the scolex in the latter species; likewise, testes in O. acapulcoensis reach and even overpass the excretory canals, whereas in the new species they are limited to the central region between these tubules.

According to Bursey et al. (1996), 75 nominal species of Ochohristica Lühe, 1898, have been described from reptiles worldwide: 5 from Australian realm, 9 from Ethiopian realm, 14 from Neartic realm, 6 from Neotropical realm, 24 from Oriental realm, and 17 from Palearctic realm. In addition, 7 new species have been described (Table I). During research conducted to establish an inventory of the helminth fauna of amphibians and reptiles from Mexico, we collected an undescribed species of Ochohristica. The main goal of this study was to describe this new species.

MATERIALS AND METHODS

During January 2002, 2 specimens of Ctenosaura pectinata (Wiegmann) were collected from Santa María Mixtequilla, Oaxaca, Mexico. Hosts were killed by intraperitoneal overdoses of sodium pentobarbital. Each host was subsequently dissected, and the organs were examined for helminths using a stereoscope. Cestodes were fixed in 4% hot formalin, stained with Meyer’s paracarmín, cleared in xylene, and mounted in Canada balsam. Drawings were made with the aid of a camera lucida. Measurements are provided in units of millimeters, including range, followed by the average, standard deviation, and sample size in parentheses. Voucher specimens of both hosts and parasites were deposited in the Museo de Zoología de la Facultad de Ciencias (MZFC), the Universidad Nacional Autónoma de México, Mexico City, the Colección Nacional de Helminhos (CNHE), and the United States National Parasite Collection (USNPC), Beltsville, Maryland.

DESCRIPTION

Ochohristica leonregagnonae n. sp.
(Figs. 1–4)

Description (based on 3 specimens): Tapeworms flattened dorsoventrally. Strobila acraspedote. Length of complete adult worm 57.6, approximately 98 proglottids. Scolex 0.5–0.8 (0.6 ± 0.17, n = 3) wide. Four oval suckers 0.19–0.23 (0.21 ± 0.011, n = 12) long by 0.15–0.19 (0.17 ± 0.012, n = 12) wide. Neck extremely short, not measured. Immature proglottids 0.2–1.25 (0.42 ± 0.26, n = 50) long by 0.7–2.2 (1.15 ± 0.37, n = 49) wide. Ratio of proglottid length to width 1:0.6–3.9 (1.5 ± 0.9, n = 45) wide. Vagina opening into genital atrium, posterior to cirrus pouch, extending posterolaterally to Mehlis’ gland, crossing poral ovarian lobe. Uterine ovigerous capsules 0.03–0.04 (0.04 ± 0.03, n = 20) in diameter, each containing a single egg. Embryonic capsule 0.02–0.03 (0.03 ± 0.002, n = 20) in diameter; oncosphere 0.02–0.03 (0.02 ± 0.003, n = 20); oncosphere hook length 0.01–0.02 (0.01 ± 0.002, n = 20). Two dorsal and 2 ventral excretory canals, latter developing a plexus.

Taxonomic summary

Type host: Ctenosaura pectinata (Wiegmann, 1834), Mexican spinytailed iguana; symbiotype, MZFC 16532.

Type locality: Cerro de la Garza, Santa María Mixtequilla, Oaxaca (16°27’21”N, 95°14’10”W).

Site of infection: Intestine.

Specimens deposited: Holotype CNHE 4899, paratypes CNHE 4900, and USNPC 94755.

Prevalence and intensity of infection: One of 2 iguanas (50%), 3 specimens in 1 host.

Etymology: The species is named after our friend Virginia...
León-Regagnon, in recognition of her work on helminth parasites in amphibians and reptiles of Mexico.

Remarks

Oochoristica leonregagnonae n. sp. differs from 66 of 82 species of the genus by its large number of testes (78±112 [95] vs. less than 60, respectively). In addition, the numerous ovarian lobes (31–79 [51]) possessed by the new species distinguish it from the other 11, i.e., less than 20 ovarian lobes. The 5 remaining species (Oochoristica rostellata from the other 11, i.e., less than 20 ovarian lobes. The 5 remaining species (Oochoristica rostellata Loewen, 1940, in eyae spp. from Africa and Europe, remaining species (Oochoristica rostellata it from the other 11, i.e., less than 20 ovarian lobes. The 5

Table I. Species of the genus Oochoristica not included in Bursey et al. (1996).

<table>
<thead>
<tr>
<th>Species</th>
<th>Realm</th>
<th>Host species</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oochoristica lizardi</td>
<td>Oriental</td>
<td>Calotes sp.</td>
<td>Misra et al. (1989)</td>
</tr>
<tr>
<td>O. mcallisteri</td>
<td>Nearctic</td>
<td>Uta stansburiana</td>
<td>Bursey and Goldberg (1996a)</td>
</tr>
<tr>
<td>O. iguanae</td>
<td>Neotropical</td>
<td>Iguana iguana</td>
<td>Bursey and Goldberg (1996b)</td>
</tr>
<tr>
<td>O. maccroyi</td>
<td>Neotropical</td>
<td>Anolis ginvivirus</td>
<td>Bursey and Goldberg (1996b)</td>
</tr>
<tr>
<td>O. jonnesi</td>
<td>Ethiopian</td>
<td>Hemidactylus mabouia</td>
<td>Bursey et al. (1997)</td>
</tr>
<tr>
<td>O. guanacastensis</td>
<td>Neotropical</td>
<td>Ctenosaura similis</td>
<td>Brooks et al. (1999)</td>
</tr>
<tr>
<td>O. acapulcoensis</td>
<td>Neotropical</td>
<td>C. pectinata</td>
<td>Brooks et al. (1999)</td>
</tr>
</tbody>
</table>

kard, 1938, infecting *Coleonyx elegans* Gray, from Oxtutzcab, Yucatán (Stunkard, 1938); *Oochoristica eumecis* Harwood, 1932, and *Oochoristica osheroffi* Meggitt, 1934, both parasitizing *C. pectinata* from Alpuyeca, Morelos (Flores-Barroeta et al., 1958, and Flores-Barroeta and Hidalgo-Escalante, 1960, respectively); *Oochoristica scelopori* Vogel and Fox, 1950, collected from *Sceloporus jarrovi* Cope, in the states of Chihuahua, Durango, Guanajuato, Hidalgo, Querétaro, and Zacatecas (Goldberg et al., 1996), and from *Sceloporus grammicus* Wiegmann, *Sceloporus megalepidurus* Smith, *Sceloporus muralatus* Cope, *Sceloporus parvus* Smith, and *Sceloporus variabilis* Wiegmann, from Coahuila, México, and Oaxaca (Goldberg et al., 2003); *Oochoristica whitentoni* Stellman, 1939, in *C. pectinata* from Iguala, Guerrero (Flores-Barroeta, 1955); and finally, *O. acapulcoensis* in *C. pectinata* from Acapulco, Guerrero (Brooks et al., 1999). According to the latter authors, all 3 species collected from *C. pectinata* from Mexico probably belong to *O. acapulcoensis*. Unfortunately, no voucher specimen of *O. osheroffi* and *O. whitentoni* is available to confirm this assertion. In the case of *O. eumecis*, we examined 1 voucher specimen deposited by Flores-Barroeta et al. (1958) (CNHE 4598). However, the poor condition of this material precludes any conclusion regarding its synonymy with *O. acapulcoensis*. Likewise, several traits (particularly the number of testes, the number of ovarian lobes, and the host family) referred to by Flores-Barroeta et al. (1958) for this material differ from the original description of *O. eumecis* (70–110 vs. 40–55 testes, numerous vs. 3–5 ovarian lobes, and Iguanidae vs. Scincidae family host [see Harwood, 1932]). For these reasons, we consider the identification of this material as erroneous and requiring additional effort to determine its taxonomic status.

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**LITERATURE CITED**


