Description of a new species of Maritrema (Digenea: Microphallidae) from Larus dominicanus (Aves: Laridae) in Buenos Aires coast, Argentina

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Abstract. Maritrema orensensis sp. n. (Digenea: Microphallidae) from Balneario Orense, Buenos Aires province, Argentina, is described. Adults of M. orensensis were collected from the intestine of the kelp gull Larus dominicanus Lichtenstein, 1823 (Aves: Laridae) and differ from adults of other related species, principally, in the shorter intestinal caeca and the incomplete ring of vitelline follicles.

Only five species of the genus Maritrema Nicoll, 1907 (Digenea: Microphallidae) have been previously reported from South America. These include two species from Brazil: M. nicolli Travassos, 1920 in Daphila bahamensis (Aves: Anatidae) and M. pulcherrima Travassos, 1929 in the digestive tract of Didelphis aurita (Mammalia: Didelphidae) (Deblock 1972); one species from Peru: M. bravoae Caballero et Ibañez, 1970 in Anthus chi peruvianus (Aves: Passeriformes) (Caballero and Ibañez 1970); one undescribed species from Venezuela in Tringa melanoleuca (Aves: Scolopacidae) (Mc Neil et al. 1996); and one species from Argentina: M. bonaerensis Etchegoin et Martorelli, 1997 in the intestine of Larus atlanticus and L. maculipennis (Aves: Laridae) (Etchegoin and Martorelli 1997).

This situation contrasts with numerous species of this genus reported in other parts of the world, illustrating the lack of information from South America. The aims of this paper are to describe a new species of Maritrema Nicoll, 1907 from the kelp gull Larus dominicanus Lichtenstein, 1823 (Aves: Laridae) and to compare it with related ones.

MATERIALS AND METHODS

A kelp gull Larus dominicanus was found dead in Balneario Orense (38°42'S; 59°47'W), a rocky coast in the Buenos Aires province, Argentina. After dissection, the digestive tract was fixed in the field with 10% formalin. In the laboratory, adult digeneans were removed from the intestine and stored in 70% alcohol, stained with Semichon's acetocarmine, mounted in Canada balsam, and studied under the microscope. The drawings were made with the aid of a camera lucida. All measurements are given in mm, with the means and standard deviations in parentheses.

RESULTS

Maritrema orensensis sp. n. Figs. 1, 2

Description (based on 15 specimens, measurements on 10): Body elongate, linguiform, 0.38-0.51 long and 0.19-0.27 wide at level of testes (0.43 ± 0.031 × 0.23 ± 0.026). Body surface fully covered by tegumental spines. Oral sucker subterminal 0.034-0.053 × 0.030-0.050 (0.041 ± 0.006 × 0.027 ± 0.012); acetabulum equatorial, 0.038-0.044 (0.042 ± 0.002) of diameter. Sucker ratio 1 : 1.02. Prepharynx 0.011-0.047 long (0.027 ± 0.012); pharynx muscular 0.026-0.037 × 0.020-0.032 (0.029 ± 0.004 × 0.024 ± 0.004). Oesophagus 0.021-0.042 long (0.031 ± 0.009); intestinal caeca: left intestinal caecum 0.080-0.122 long and 0.008-0.027 wide (0.100 ± 0.017 × 0.019 ± 0.008), right intestinal caecum 0.074-0.119 long and 0.008-0.026 wide (0.098 ± 0.019 × 0.016 ± 0.008), terminating in vicinity of anterior border of cirrus-sac. Testes oval, symmetrical, postovarian; left testis 0.027-0.069 long and 0.034-0.079 wide (0.046 ± 0.015 × 0.056 ± 0.013), right testis 0.027-0.066 long and 0.041-0.095 (0.045 ± 0.013 × 0.049 ± 0.013). Cirrus-sac nonmuscular, thin-walled, arches, 0.093-0.165 long and 0.034-0.077 (0.136 ± 0.022 × 0.049 ± 0.013), occupying space between intestinal caeca and acetabulum. Seminal vesicle oval, located at posterior end of cirrus-sac, 0.035-0.072 × 0.021-0.037 (0.048 ± 0.01 × 0.030 ± 0.005). Prostatic cells numerous, 0.009-0.011 (0.010 ± 0.01) in diameter. Pars prostatica not evident. Ductus ejaculatorius slightly convoluted. Cirrus invaginated, unspined, 0.058-0.074 × 0.021-0.025 (0.066 ± 0.008 × 0.023 ± 0.002). Ovary

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trilobated, middle-dextral, anterior border overlapping acetabulum, 0.034-0.079 × 0.034-0.072 (0.050 ± 0.012 × 0.053 ± 0.01). Laurer’s canal and seminal receptacle not seen. Uterus extending from anterior edge of testes until end of body. Eggs numerous, operculated, 0.012-0.016 × 0.074-0.011 (0.015 ± 0.001 × 0.010 ± 0.003). Short metraterm muscular. Genital pore sinistral to acetabulum. Vitellarium in an inverted U-shaped incomplete ring between testes and ovary.

**Type host:** Larus dominicanus Lichtenstein, 1823 (Aves: Laridae).

**Site of infection:** intestine.

**Type locality:** Balneario Orense (38°42’S; 59°47’W), Buenos Aires province, Argentina, January 1997.

**Specimens deposited:** holotype (No. 3955) and paratypes (No. 3956) in the Helminth Collection, Museo de La Plata, La Plata, Buenos Aires province, Argentina; paratype in the helminthological collection of the Institute of Parasitology, České Budějovice, Czech Republic, (IPCAS D-405).

**Etymology:** the specific name is derivated from the name of the type locality Orense.

**Discussion**

Out of the species listed in Deblock’s keys (Deblock 1971), this new species is most similar to *Maritrema gratiosum* Nicoll, 1907, but it differs in having shorter intestinal caeca (not reaching testicular fields), an arched cirrus-sac and no evidence of a pars prostatica.

With respect to the species described after the classification of Deblock (1971) and according to Gracenea et al. (1993), *M. orensensis* would belong to the group formed by the species morphologically similar to *M. acadiae* Swales, 1933. This group, which has a simple genital atrium and a non-spinous cirrus, includes *M. laricola* Ching, 1963, *M. paracadiae* Ching, 1974 and *M. chiriacae* Deblock, 1975. These four species differ from the new species in that they have longer intestinal caeca (reaching the acetabulum) and the vitellarium forming a complete ring (Ching 1963, 1974, Deblock 1975, Deblock and Canaris 1992).

Following to Gracenea et al. (1993) there is a group of species without characteristics in common. This includes *M. pacifica* Ching, 1974, *M. majestova* Xiao-Lin, 1976 and *M. feliui* Gracenea, Montoliu et Deblock, 1993. *M. orensensis* differs from *M. pacifica* in having shorter intestinal caeca (not reaching to the acetabulum), an oval seminal vesicle and smaller eggs (Ching 1974, Xiao-Lin 1976). *M. majestova* can be distinguished by having longer intestinal caeca, a complete ring of vitelline follicles and eggs with a thicker shell. From *M. feliui*, the new species differs in having shorter intestinal caeca (not reaching to the posterior border of the acetabulum), larger prostatic cells and vitelline follicles not forming a complete ring.

Comparison with the species from South America shows that the new species differs from *M. nicollii* Travassos, 1920 in having a larger oral sucker and ovary.

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**Fig. 1.** Adult of *Maritrema orensensis* sp. n., ventral view. Scale bar = 0.1 mm.

**Fig. 2.** Detail of the terminal genitalia of *Maritrema orensensis* sp. n., dorsal view. Scale bar = 0.05 mm; c - cirrus; cs - cirrus-sac; e - eggs; gp - genital pore; m - metraterm; ov - ovary; pc - prostatic cells; sv - seminal vesicle; u - uterus; v - vitelline follicles. Scale bar = 0.05 mm.
and in the absence of a voluminous complex genital atrium-metraterm. It differs from *M. pulcherrima* Travassos, 1929 in having a sucker ratio close to 1 : 1, a smaller oral sucker and a different form and configuration of vitellarium (Deblock 1972). The new species can be distinguished from *M. bravoae* Caballero et Ibáñez, 1970 by the shorter intestinal caeca and different form and extension of the vitelline follicles (Caballero and Ibáñez 1970). *M. orensensis* differs from *M. bonaerensis* Etchegoin et Martorelli, 1997 in having shorter intestinal caeca (not reaching to the testicular fields), a trilobed ovary, vitellarium forming an incomplete ring and smaller eggs (Etchegoin and Martorelli 1997).

The new species described here, together with *Leviseniella anenteron* (Szidat, 1964), are the only two microphallids reported from *Larus dominicanus* in South America.

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**REFERENCES**


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