

Occurrence of *Contracaecum rudolphii* in New Hosts in Chile

P. Torres, V. Sierpe, and R. Schlatter

Institute of Parasitology, Universidad Austral de Chile, Valdivia, Chile

The presence of *Contracaecum* larvae in fishes of the southern coast (Torres et al. 1981) and from Calafquén lake (Torres, unpublished) have been reported in Chile. More recently, *Contracaecum rudolphii* Hartwich, 1964 has been observed in cormorants, *Phalacrocorax olivaceus*, captured around the Valdivia river estuary (Torres et al. 1982).

The present note lists new definitive hosts for *C. rudolphii*, together with data on its prevalence and intensity of the infections.

Fifty-six piscivorous and scavenging birds were captured between March 1977 and December 1980 at Calafquén lake (39° 32' S, 72° 08' W). Species examined included 23 *Larus maculipennis*, 21 *Larus dominicanus*, 1 *Larus serranus* and 11 *P. olivaceus*. The gastrointestinal system of birds was examined for parasites (Torres et al. 1974), Anisakid nematodes were fixed in 70% ethanol and cleared with lactophenol.

The three species of *Larus* are new hosts for *C. rudolphii* and the greatest prevalence of infection and mean parasite load of adult nematodes and larvae was present in *P. olivaceus*, and decreased in *L. dominicanus* and *L. maculipennis* (Table 1). This may be because the former is mainly piscivorous but occasionally ingests crustaceans. *Larus dominicanus* feeds mainly on fishes, insects and crustaceans, but it also scavenges. *Larus maculipennis* feeds mainly on insects and sometimes fishes and garbage (Schlatter, unpublished). These feeding habits would be in accordance with our results.

Contracaecum rudolphii has been described for the Neotropical (Torres et al. 1982), Nearctic, Palearctic, Ethiopic (Barus et al. 1978; Whitfield and Heeg 1977) and Australian regions (Johnston and Mawson 1941). This species has been found in a great number of host birds (Barus et al. 1978) and its distribution is related to that of shags or cormorants (*Phalacrocorax* spp.), one of the primary definitive hosts.

Phalacrocorax olivaceus, distributed from southern North America to Tierra del Fuego, probably acts as a connecting bridge between the hemi-

Table 1. Prevalence and intensity of infection by *Contracaecum rudolphii* in fish-eating birds from Calafquén lake, Chile

Birds	Examined infected (%)	Number of worms Mean (range)	
		Adults	Larvae
<i>Phalacrocorax olivaceus</i>	$\frac{11}{4}$ (36.4)	20.5 (13–28)	7.5 (1–14)
<i>Larus dominicanus</i>	$\frac{21}{5}$ (23.8)	14.5 (9–20)	3.0 (1–6)
<i>Larus maculipennis</i>	$\frac{23}{4}$ (17.4)	3.5 (1–6)	1.0 (1)
<i>Larus serranus</i>	$\frac{1}{1}$ (100)	10.0 (10)	2.0 (2)

spheres, thereby facilitating the dispersal of this nematode species. *Larus dominicanus*, *L. maculipennis* and *L. serranus* are restricted more to the Neotropical region, but the former is also found in Antarctic areas and the circumpolar subantarctic seas (Philippi 1964; Schauensee 1970; Blake 1977).

The presence of *Contracaecum* larvae in *Notothenia angustata* and *N. cornuola* (Torres et al. 1981) and its evidence in lake fishes (Torres, unpublished) is probably related with the subject of this report. Gulls and cormorants move between inland lakes and the seashore, where they probably acquired the nematode and subsequently dispersed it throughout their habitat.

Further investigation of helminths of wild birds in Chile is needed because of the importance of the health of wildlife populations and the potential danger of zoonosis (Sprent 1967).

Some nematodes were deposited in the USNM. Helm. Coll. as N° 77050-77051-77052. This work was supported by Grant S-80-21, Dirección de Investigación, Universidad Austral de Chile.

References

- Barus V., Sergeeva TP, Sonin MD, Ryzhikov KM (1978) Helminths of fish-eating birds of the Palearctic Region I. Academia, Publishing House of the Czechoslovak Academy of Sciences, Prague
- Blake ER (1977) Manual of Neotropical Birds. Vol. 1. The University Chicago Press
- Johnston TH, Mawson PM (1941) Ascaroid nematodes from Australian birds. Trans Roy Soc South Australia 65:110–115
- Philippi R (1964) Catálogo de aves de Chile con su distribución geográfica. Inv Zool Chilenas 11:1–79
- Schauensee RM (1970) A guide to the birds of South America, Livingston Publishing Company, Pennsylvania
- Sprent JF (1967) Helminth Zoonoses: An Analysis. Helminthol Abstr 38:333–350

- Torres P, Franjola R, Yañes L, Diaz V, González E, Montecinos M (1974) Estudio preliminar sobre helmintos y artrópodos del *Gallus domesticus* en la provincia de Valdivia, Chile. Bol Chile Parasitol 29:115–117
- Torres P, Pequeño G, Jeria ME, San Martín L (1981) Larvas de Anisakidae (Railliet y Henry, 1912) Skrjabin y Karokhin, 1945 en peces de la costa sur de Chile. Bol Chile Parasitol 36:39–41
- Torres P, Figueroa L, Saldivia A, Barrientos J (1982) Gastrointestinal helminths of fish-eating birds from the Valdivia river, Chile. J Parasitol 68:1157
- Whitfield AK, Heeg J (1977) On the life cycles of the cestode *Ptychobothrium belones* and nematodes of the genus *Contracaecum* from lake St. Lucia, Zululand. South African J Sci 73:121–122

Accepted February 28, 1983