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NEW DATA ON BIRD HELMINTHS IN MONGOLIA

© D. I. Lebedeva,[1, *] **K. Chantuu**[2]

[1] Institute of Biology, Karelian Research Centre, Russian Academy of Sciences,
11 Pushkinskaya St., 185910, Petrozavodsk, Russia
* E-mail: daryal78@mail.ru
[2] Institute of Geoecology, Mongolian Academy of Sciences
13 Baruun Selbe, 211238, Ulaanbaatar, Mongolia
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НОВЫЕ ДАННЫЕ О ГЕЛЬМИНТАХ ПТИЦ МОНГОЛИИ

© Д. И. Лебедева,[1] К. Чантуу[2]

Институт биологии Карельского научного центра Российской академии наук
ул. Пушкинская, 11, Петрозаводск, 185910
[2] Институт Геоэкологии Академии наук Монголии,
Баруун Сэлбэ, 13, Улан-Батор, 211238, Монголия

For the first time the data on helminths in piscivorous birds (the great cormorant and the Mongolian gull) in Mongolia were obtained. Surveys yielded 11 species (Cestoda — 2, Trematoda — 6, Nematoda — 3). The cormorant hosted 5 helminth species, the herring gull — 6 species.
Key words: *Phalacrocorax carbo* L., *Larus argentatus mongolicus*, parasites, Mongolia.

The data on parasites in Mongolia are rather fragmentary. Most materials are completed on fish parasites (Pugachev, 2001—2004; Batueva, 2011). The data on mammal parasites are also published (Odening et al., 1996; Ganzorig et al., 1999; Sharkhuu, 2001; Sharkhuu, Sharkhuu, 2004; Gardner et al., 2009; Kuznetsov et al., 2014). The only study of bird parasites in Mongolia is devoted to investigation of nematodes in passerines (Ganzorig, 1986). This paper presents some data on the parasites of piscivorous birds in Mongolia.

MATERIALS AND METHODS

In August 2012 the Russian Academy of Sciences and Mongolian Academy of Sciences had a joint expedition to the Khar Us Nuur National Park (Great La-

kes Depression, Western Mongolia). During the expedition, one great cormorant (*Phalacrocorax carbo sinensis* Shaw et Nodder, 1801) and two specimens of the Mongolian gull (*Larus argentatus mongolicus* Suschkin, 1925) were found dead on Lake Khar shore (48°00′16.0′′ N 93°01′54.1′′ E). The Mongolian gull (*L. a. mongolicus*) has been regarded as a subspecies of the group *L. argentatus* Pontoppidan, 1763 (Stepanyan, 2003).

The birds were examined by partial parasitological necropsy. Their digestive tracts were fixed in 96 % alcohol to be examined in the laboratory. The contents of the digestive tract were sedimented and washed several times. Helminths were collected from them by visual examination with stereomicroscope. Helminths were collected, fixed and treated in the laboratory using conventional techniques (Dubinina, 1971).

Morphological identification and measurements of all parasites were made and processed using microscope with the Levenhuk ToupView 3.5 software (V.3, Levenhuk Inc.) of collective usage platform (Institute of Biology, Karelian Research Centre of the Russian Academy of Sciences).

The identification guides of Krasnolobova (1985), Ryzhikov et al. (1985), Niewiadomska (1984, 1987), Našincová et al. (1993), Shigin (1993), Anderson (2000), Faltynkova et al. (2008) were used.

RESULTS AND DISCUSSION

The digestive tracts of two bird species examined in the study contained 11 helminth species: cestodes — 2, trematodes — 6, nematodes — 3 (see table). All the helminths matched the typical morphology and size characteristics described in identification keys.

Parasites of the great cormorant were represented by 5 helminth species. The most significant was the cormorant infection with cestode *Paradilepis scolecina* and nematode *Contracaecum rudolphi.* Trematodes, although represented by 3 species, were less abundant.

The helminth fauna of the Mongolian gull was represented by 6 parasite species (see table). The birds were most commonly infected by trematodes, especially *Plagiorchis elegans.* The gulls were also abundantly infected with the trematode *Diplostomum paracaudum.* Specimens *D. pseudospathaceum* and nematodes (*Contracaecum microcephalum*, *Cosmocephalus obvelatus*) were few. Cestode *Diphyllobothrium dendriticum* occurred occasionally.

All the parasites found in the Cormorant from Mongolia also spread throughout its areal (Sitko et al., 2006; Švažas et al., 2011; Biedunkiewicz et al., 2012). All the helminths found in gulls have been reported both from areas adjacent to Mongolia (Nekrasov, 2000), and from the European part of the Palaearctic region (Shabunov, 2002; Georgieva et al., 2013; Lebedeva et al., 2013).

The newly obtained data on the helminths of piscivorous birds expand our knowledge of the species composition of parasites in Mongolia. They can be used to investigate the life cycles of helminths in the region, as well as to study the biology of birds.

Helminths in the digestive tract of piscivorous birds of Mongolia

Host species	Group of parasite	Parasite species	Number of helminths*	Locality
Phalacrocorax carbo L.	Cestoda	*Paradilepis scolecina* (Rudolphi, 1819)	94	Small intestine
		Paryphostomum radiatum (Dujardin, 1845)	23	Large intestine
	Trematoda	*Petasiger exaeretus* (Dietz, 1909)	17	Large intestine
		Hysteromorpha triloba (Rudolphi, 1819) Lutz, 1931	29	Small intestine
	Nematoda	*Contracaecum rudolphi* (Hartwich, 1964)	74	Gizzard
			1	Small intestine
Larus argentatus mongolicus L.	Cestoda	*Diphyllobothrium dendriticum* (Nitzsch, 1824) Lühe, 1910	2—7	Small intestine
		Plagiorchis elegans (Rudolphi, 1802)	196—790	Small intestine, Large intestine, Caecum, Cloaca
	Trematoda	*Diplostomum paracaudum* (Iles, 1959)	35—137	Small intestine
		D. pseudospathaceum (Niewiadomska, 1984)	1—6	Small intestine
	Nematoda	*Contracaecum microcephalum* (Rudolphi, 1819)	2—3	Small intestine, Cloaca, Gizzard
		Cosmocephalus obvelatus (Creplin, 1825)	17—32	Esophagus, Gizzard

Note. * — states the actual number of helminths found in each bird.

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