



Chewing lice (Phthiraptera: Amblycera, Ischnocera) from Red Sea gulls with new host-parasite records

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Abstract

Knowledge about chewing lice from marine birds of the Red Sea is minimal. Five species of gulls were examined for chewing lice in three different localities of the Saudi Arabian Red Sea coast. Two gull species were examined for lice for the first time (*Larus armenicus* Buturlin, 1934 and *Larus michahellis* Naumann, 1840) and their lice represent new host-louse associations. Four species and two subspecies of lice were identified from 159 specimens collected. *Actornithophilus piceus lari* (Packard, 1870) and *Austromenopon transversum* (Denny, 1842) (suborder: Amblycera), and *Quadriceps punctatus* (Burmeister, 1838) and *Saemundssonina lari* (O. Fabricius, 1780) (suborder: Ischnocera) were recorded for the first time from Saudi Arabia and Red Sea birds. Taxonomic and ecological notes, type hosts, data on specimens examined, collecting localities, an identification key, and photographs of each species and subspecies are given.

Key words: chewing lice, Phthiraptera, Amblycera, *Actornithophilus*, *Austromenopon*, Ischnocera, *Saemundssonina*, *Quadriceps*, Red Sea, Saudi Arabia, gulls, new host-parasite records

Introduction

Ectoparasites from Middle East marine birds are poorly known, especially those from the Red Sea (Negm *et al.* 2013). Among them, chewing lice are one of the most diverse parasites of avian hosts, with over 4,000 species recognized as valid worldwide (Price *et al.* 2003: 3). There are few available publications dealing with chewing lice associated with birds in the Middle East especially for marine species, e.g. Hafez and Madbouly (1966, 1968a,b), Abu Yaman (1978), Aldryhim (1991), Taula & Hussain (1999), El-Ahmed *et al.* (2012).

Gulls (Charadriiformes: Laridae) are relatively well-known marine birds around the world, and are known for their opportunistic feeding habits and long life span (Anonymous 2008; Martin 2004: 249). There are 11 species and one subspecies of gulls reported from the Red Sea (Table 1). Most of these species have affinities with the Mediterranean Sea and the Indian Ocean, while the white-eyed gull is the only endemic species (Shobrak *et al.* 2003: iii; Porter & Aspinall 2010: 144). The Red Sea is the main passage for many European gulls species migrating to their winter ranges in Africa. Gulls are ground-nesting birds, and during the breeding seasons they constitute multispecies colonies on remote islands and rocky cliffs on the sea shore (Welty & Baptista 1990). Most gulls have a shared niche not only during the breeding season but also through their entire life (Fig. 1).

There are several species in four genera of chewing lice known to infest gulls. The genera are: *Actornithophilus* and *Austromenopon* in the suborder Amblycera, and *Quadriceps* and *Saemundssonina* in the suborder Ischnocera. Some publications dealing with these lice from gulls are: Timmermann (1949a,b; 1951; 1952a,b; 1954), Clay (1959; 1962), Broek (1967), Lafuente *et al.* (2000), and González-Acuña *et al.* (2006; 2011). However, no lice had been previously recorded on gulls from the Red Sea. Therefore, the aim of this work was to collect and identify lice from gulls from this area for the first time, and to publish the results including their taxonomy, host-parasite records, illustrations, and an identification key to the genera and species.

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