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MALLOPHAGA ON THE SOUTH POLAR SKUA (*Catharacta skua maccormicki*)

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During the austral summer seasons of 1963–64, 64–65, 65–66, McCormick or South Polar Skuas (*Catharacta skua maccormicki*) were caught and examined for external parasites. This investigation was carried out at Cape Royds (Lat. 77° 33′ S., Long. 166° 09′ E.) on Ross Island, McMurdo Sound, Antarctica. The work was part of a detailed study of the McCormick Skuas in McMurdo Sound and one of the activities of the Canterbury University Antarctic Biology Unit. The family Stercorariidae comprises the Great Skuas (*Catharacta* spp.) and the Lesser Skuas or Jaegers (*Stercorarius* spp.), the former being a bipolar genus of sea birds, of which one form inhabits the Northern Hemisphere and several the Southern.

The McCormick Skua is a migratory species which spends the austral winter among the pack ice or further north and returns south each spring to its breeding grounds on the Antarctic coast and adjacent islands.

The birds were caught in a wire cage and then anaesthetized with either 'Nembutal' or 'Pentathal'. The head and neck were carefully examined for external parasites, using a pair of forceps to remove lice; then a plastic bag containing chloroform was tied around the neck to contain the body of the bird but leaving the head and neck free. After thirty to forty minutes the bird was removed from the bag and shaken over a large sheet of white paper, and the plumage carefully examined for any parasites still remaining. The parasites were preserved in 70% alcohol. Identification of the Mallophaga was performed by Dr Theresa Clay of the British Museum (Nat. Hist.), London.

Of the 459 birds examined, 86 (18.7%) were infested with lice. Two species of the family Philopteridae were identified—*Saemundssonia stresemanni* Timmermann, 1949, and *Haffneria* (previously *Diomedicola*) *grandis* Piaget, 1880.

Of the 86 adults found infested, 67 were deloused as thoroughly as possible. From the resulting collection it was found that 48 birds were infested with *S. stresemanni* only, 7 with *H. grandis* only, and 12 with both species. The mean number of ♂♂, ♀♀, and nymphs of *S. stresemanni* per host was 1.1, 2.0, and 0.5 respectively. The mean number of ♂♂, ♀♀, and nymphs of *H. grandis* per host was 2.1, 12.0, and 6.0 respectively (Table 1). Both ♀♀ and ♂♂ were found to be infested and the youngest bird found infested was a five year old. Chicks were examined periodically throughout the seasons but none were found to be infested. Two birds that were deloused in the first collecting season were

Table 1. Number of lice per host.

	S. stresemanni		*H. grandis*	
	Mean	Range	Mean	Range
♂♂	1.1	0–4	2.1	1–6
♀♀	2.0	1–2	12.0	1–42
Nymphs	.5	0–4	6.0	2–68
Total	3.5	1–11	20.0	4–116

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found to be reinfested in the second collecting season.

S. stresemanni

Lice of this species were found exclusively on the head and neck region, where they were attached to the petiole of the feathers immediately above the skin of the bird. Although more birds were infested with this species it can be seen from Table 1 that the number of lice per bird was less than in the case of *H. grandis*. Other Stercorariidae hosts of *S. stresemanni* and their distribution are as follows:

C. skua antarctica (Lesson)	Falkland Is., and South Shetlands.
Stercorarius parasiticus (L)	Alaska and North Atlantic.
S. pomarinus (Temminck)	Alaska and North Atlantic.
S. skua skua (Brunnich)	North Atlantic.

H. grandis

Most specimens of this species were found at the base of the primary and secondary wing feathers and a few were found in the region of the oil gland. The only other recorded Stercorariidae host is *S. skua skua*.

Haffneria belongs to the *Philoceanus*, a complex of genera found elsewhere only on the Procellariiformes. Clay (1957) discussed the question as to whether the presence of *H. grandis* on Charadriiformes is due to secondary infestation from one of the Procellariiformes; or whether its presence suggests a phylogenetic relationship between the Procellariiformes and the Charadriiformes. Other genera of lice found on hosts of both orders are *Saemundssonia*, *Actornithophilus* (called *Longimenopon* on the Procellariiformes) and *Austromenopon*. If *H. grandis* alone is considered it seems that secondary infestation has not taken place between the two orders of birds, and they are related phylogenetically.

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