

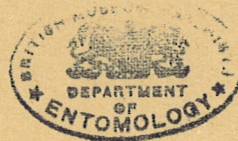
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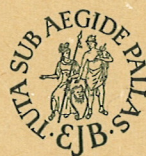
OBSERVATIONS ON THE INFECTION OF YOUNG
HERRING AND LESSER BLACK-BACKED GULLS
BY ECTOPARASITES

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**OBSERVATIONS ON THE INFECTION OF YOUNG
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VAN DEN BROEK (1967) has reported a high incidence of infection by the headlouse *Saemundssonina lari* (O. Fabricius, 1780) on newly-hatched pulli of the Black-headed Gull *Larus ridibundus*. This communication deals with two other gull species which have been examined for Mallophaga, as well as for other ectoparasites.

The gulls studied were pulli in a mixed breeding colony of the Herring Gull *Larus argentatus* and the Lesser Black-backed Gull *Larus fuscus graellsii*. They occupied a gullery of about 36 hectares situated in the dunes of the Water-Supply Company of The Hague, in Wassenaar.

TABLE 1

NUMBER OF BREEDING PAIRS IN THE GULLERY AT WASSENAAR (VAN DONGEN 1966-1970)

	<i>Larus argentatus</i>	<i>Larus fuscus graellsii</i>
1966	141	20
1967	201	27
1968	194	42
1969	221	48
1970	268	66

The breeding colony was visited once in 1966, three times in 1968, and four times in both 1969 and 1970. The numbers of breeding pairs in this colony over the past five years are given in Table 1. The nesting sites of the Lesser Black-backed Gull were concentrated in small groups throughout the gullery, in distinct contrast of those of the Herring Gull.

The pulli examined varied in age between one day and about 6 weeks (age of fledging). All examinations were made in the early morning hours. The heads of all chicks were searched for headlice, while the bodies of the chicks up to 3 weeks of age, with some exceptions of older chicks, were also searched for the presence of other ectoparasites. After inspection, one leg of the pullus was marked with ink to avoid

double examinations. All ectoparasites collected were sent to the Institute of Veterinary Parasitology and Parasitic Diseases at Utrecht for authoritative identification.

In this communication special attention is given to a comparison of the Mallophaga found on the Herring and Lesser Black-backed Gull with those obtained from the Black-headed Gull by VAN DEN BROEK (1967).

As contrasted to the situation observed in the Black-headed Gull, 1 to 4-week old pulli of the Herring and Lesser Black-backed Gull were not found to be frequently infected by Mallophaga (Table 2). The twelve parasites found were identified as *Saemundssonina lari* (1♂ and 11♀♀); only one of these was found on each infected host. In two of

TABLE 2

INFECTION OF YOUNG *Larus argentatus* AND YOUNG *Larus fuscus graellsii*
BY *Saemundssonina lari* IN THE GULLERY AT WASSENAAR

Date	<i>Larus argentatus</i>		<i>Larus fuscus graellsii</i>	
	Number of pulli examined	Number of pulli infected	Number of pulli examined	Number of pulli infected
9-7-1966	40	0	13	0
9-6-1968	35	0	11	0
16-6-1968	20	0	10	0
23-6-1968	34	0	10	0
14-6-1969	7	0	13	1
21-6-1969	4	0	0	--
26-6-1969	15	2	10	3
5-7-1969	8	0	18	1
2-6-1970	44	1	27	0
10-6-1970	37	2	24	0
23-6-1970	37	2	19	0
1-7-1970	36	0	22	0

the twelve chicks found infected (one Herring Gull and one Lesser Black-backed Gull), the headlice were obtained from the belly, the other headlice all originating from between the downy feathers on the interramal area of the mandible. This may indicate a preference of *Saemundssonina lari* for this region of these host species.

VAN DEN BROEK (1967) also observed eggs, together with a high incidence of adult individuals; I, however, was not able to find any,

in spite of careful inspection. No satisfactory explanation can be postulated for this discrepancy at the moment.

The low incidence of Mallophaga found in the Wassenaar gullery might be explained as follows. The breeding habitat of the Black-headed Gull in general is rather humid, that of the Herring and Lesser Black-backed Gull however considerably drier. Because Mallophaga survive better at high relative humidities, environmental conditions on the pulli of the latter two host species may be unfavourable for these parasites. Furthermore, I suppose that a lowered incidence of Mallophaga on the parents which live in the same environment (supposedly deleterious to Mallophaga) may reduce the chance of the chicks becoming infected by parental-born Mallophaga. However, as the number of Mallophaga on the adult gulls is unknown, the above hypotheses could not be checked. However, population densities of Mallophaga on healthy individuals of various bird species show wide variations (ROTHSCHILD & CLAY 1961), though there is no explanation for this phenomenon up till now.

The gull chicks were also examined for fleas and ticks: a single ♂ of the flea *Ceratophyllus garei* was found in the dense body down feathers of each of two Lesser Black-backed Gulls, and one nymph of the tick *Ixodes ricinus* on each of two 5-week old Herring Gull chicks. On several chicks of the Pheasant *Phasianus colchicus* captured in the same area 25-50 ticks per bird were counted. The higher number of ticks on the Pheasant chicks is likely to be the outcome of an increased chance of meeting with tick nymphs (MILNE 1949), since young Pheasants, though smaller than young gulls, traverse a much larger area in search of food than young gulls do.

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SAMENVATTING

Kuikens van Zilvermeeuw en Britse Kleine Mantelmeeuw zijn gedurende de nestperiode aanzienlijk minder geïnfecteerd met de kopluis *Saemundssoniana lari* dan kuikens van de Kokmeeuw (VAN DEN BROEK 1967). Daar Mallophagen beter overleven bij hogere relatieve vochtigheden, is het mogelijk dat dit verschijnsel wordt veroorzaakt door het verschil in vochtigheidsgraad tussen het broedhabitat van de Kokmeeuw tegenover dat van de eerstgenoemde meeuwen. Onderzoek naar de aanwezigheid van andere soorten ectoparasieten resulteerde in slechts incidentele vondsten van vlooiën en teken.

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