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The Mallophaga as an aid to the classification of birds

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The classification of the Mallophaga, a group of obligate ectoparasitic insects, normally parallels that of their hosts. Can this be used as confirmation that the present classification of birds is a phyletic one and where the distribution of the Mallophaga suggests a different classification should this be given any weight? Three possible explanations of the present distribution are:—

(1). Ancestral stocks of the mallophagan fauna were present on ancestral stocks of the bird order and evolved and diverged with their hosts; both classifications of hosts and parasites would be phyletic.

(2). The Mallophaga remained non-host-specific until late in the evolution of their hosts; convergent and parallel evolution would account for the similarity of Mallophaga on similar hosts. The Mallophaga could be polyphyletic, the hosts monophyletic or polyphyletic with possible convergence in feather structure. However, the overall similarity of the species comprising mallophagan genera used in such comparisons seems to make convergence an unlikely explanation; but parallelism may have occurred among the species parasitic on the lower taxa of a host order.

(3). Secondary infestations occurred throughout the evolution of host and parasite.

Probably all these contributed to the present distribution. Thus, while the classification of the Mallophaga does reflect the phylogeny of their hosts and cases of apparent anomalous distribution may be due to incorrect host classification, these can equally well be explained by other factors in the evolution of the Mallophaga.