

The Adaptive Significance of Anting

PAUL R. EHRLICH, DAVID S. DOBKIN, AND DARRYL WHEYE¹

The function of anting has been controversial. Anting may be an auto-erotic act (Whitaker 1957; but see Simmons 1966), or it may soothe skin irritated during the early stages of feather growth (Potter 1970). More reasonably, anting may help in feather maintenance by supplementing preen oil, helping to remove stale lipids, or combatting ectoparasites (Simmons 1985). The anti-ectoparasite function is also suggested by at least one observation of a Jungle Mynah (*Acridotheres fuscus*) "anting" with a millipede (Clunie 1976). Millipedes produce powerful defensive secretions that are effective against arthropods (Monro et al. 1962, Schildknecht et al. 1967) and other organisms.

There is now evidence that the metapleural glands of ants produce complex secretions that include the plant auxins β -indoleacetic acid (IAA) and phenylacetic acid (PAA) and that those secretions are spread by the ant over its entire body. The secretions are antibiotic, inhibiting the growth of both fungi and bacteria (see Beattie 1985 for summary). We suggest that the secondary acquisition of these antibiotic secretions would be an important reason for anting, and might help to explain the often-recorded correlation of anting with conditions of high humidity—conditions that would promote both bacterial and fungal infections of the skin.

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¹ Department of Biological Sciences, Stanford University, Stanford, California 94305 USA.

ERRATUM

In the Appendix to "Reproductive performance of seabirds: the importance of population and colony size" by Hunt, Eppley, and Schneider (1986, *Auk* 103: 306-317), the Glaucous-winged Gull in sections F, G, H, J, K, and L should read Glaucous Gull. In section M delete Glaucous Gull.