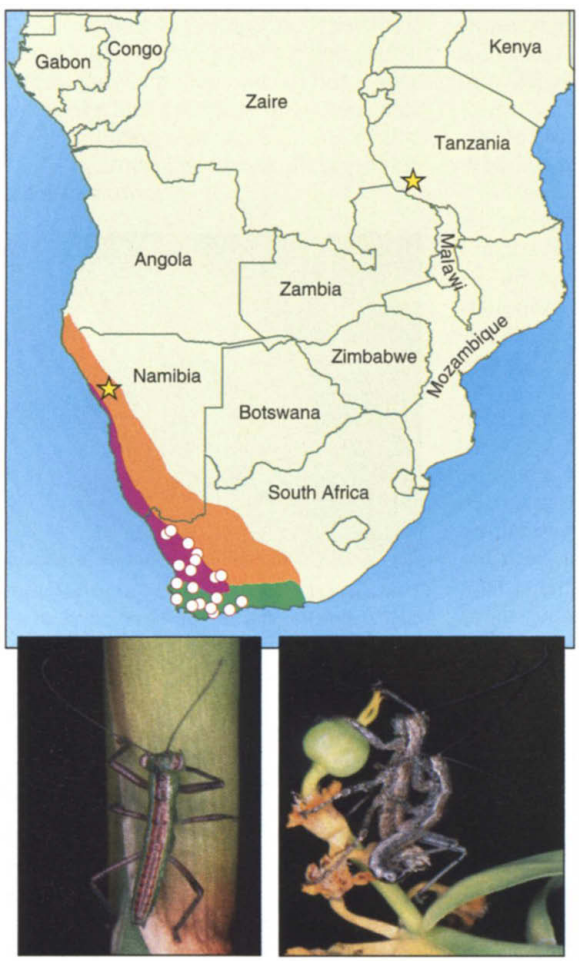
Mantophasmatodea Now in South Africa

THE DRAMATIC DISCOVERY OF EXTANT representatives of the new insect order Mantophasmatodea in Namibia and Tanzania ("Mantophasmatodea: a new insect order with extant members in the Afrotropics," Reports, K.-D. Klass *et al.*, 24 May, p. 1456; "Mantophasmatodea: a new insect order?," E. Tilgner, Technical Comments, 2 Aug., and "Response," K.-D. Klass, www.sciencemag.org/cgi/content/full/297/5582/731a) galvanized entomologists into searching for this group in other parts of the world.

Two of us (M.D.P. and J.F.C.) had previously noted unusual orthopteroid insects in the semiarid Succulent Karoo (part of the Karoo-Namib region) of South Africa. Their identity became apparent after the description of Mantophasmatodea was published by Klass *et al.* A search for additional material in South African Museums procured 29 pinned specimens, collected in South Africa (1890 to 1994) from 13 localities (one pair has been preserved in copula). Males were on average smaller (body length 12.8 ± 2.22 mm) and more slender than females (body length 16.9 ± 1.79 mm). Interestingly, a specimen from a series of five individuals collected in 1890 bears the label "*Ograbiesa ferox* n.g. & sp. P," in Louis Albert Péringueyi's (director of the South African Museum, 1906–24) handwriting. This manuscript name was, however, never published. Field collecting has shown that Mantophasmatodea are abundant in the Western Cape Province of South Africa, where they hatch and develop during the wet winter months, reaching maturity in spring. Laboratory colonies are providing details of the life history, mating (see figure), and egg-laying behavior. Specimens from museum and field collections are currently known from 25 localities (see figure), some of which are 600 km apart; they appear to represent at least three species.



Current global distribution of Mantophasmatodea. New records from South Africa (○) are located in the Cape Floral Kingdom (green) and Succulent Karoo (pink). Previous records (☆) are restricted to Namibia (Karoo-Namib zone, orange) and Tanzania. (Inset) Two of the new species of Mantophasmatodea from South Africa (nymph of gracile species at left, mating pair of Karoo species at right).

Our records show that Mantophasmatodea are widespread within the Cape Faunal Zone (*1*) [the phytogeographical equivalent being the combined Karoo-Namib region and Cape Floral Kingdom (*2*)]. The exceptional species richness and endemism of many plant (*2*) and animal groups (*3*) of this globally important biodiversity hotspot (*4*) are attributed to the unique combination of ecological, geological, and climatic variables of the area. The current distribution of the Mantophasmatodea is centered within the Cape Faunal Zone, with the single preserved Tanzanian specimen representing a geographical outlier.

Both putative sister taxa of the Mantophasmatodea (Grylloblattodea and Phasmatodea) are small orders. Moreover, the Mantophasmatodea had, until recently, escaped detection. We therefore suggest that the extant Mantophasmatodea are likely to be a small, relictual order, with a restricted global distribution. Further examination of the unusual, gracile Western Cape species will probably reveal deeper taxonomic diversification within the order [only a single family, Mantophasmatidae, is currently recognized (see Klass *et al.*)]. A survey of the systematics, distribution, ecology, and conservation of South African species is now under way.

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Mycobacterium leprae and Demyelination

RAMBUKKANA *ET AL.*, USING AN IN VITRO NERVE tissue culture model, report that *Mycobacterium leprae* attachment to myelinated Schwann cells induces rapid demyelination ("Contact-dependent demyelination by *Mycobacterium leprae* in the absence of immune cells," Reports, 3 May, p. 927). This process of nerve damage was mediated, at least in part, by the *M. leprae*–specific cell wall constituent phenolic glycolipid-1. Second, in vivo intraneural injection of *M. leprae*