DISPERSAL OF PLANT PESTS INTO THE VIRGIN ISLANDS

SCOTT E. MILLER
Bishop Museum, Box 19,000-A,
Honolulu, HI 96817

On 26 October 1990, Greg Mayer, Tina Kuklenski, and Scott Miller sampled invertebrates from a large shipment (an entire barge) of potted plants being unloaded at Guana Island, British Virgin Islands (BVI). Becker & Miller (1992) provide background on Guana Island. The plants, including many specimens of several species of palms, were being imported from nurseries in southern Florida for landscaping. The importers had apparently met all BVI regulations and had checked in with government authorities in Tortola before the barge proceeded to Guana Island. The shipment was infested with large numbers of insects and snails, most of which have been identified as follows. A millipede, an isopod, and several beetle larvae were not identified.

Cockroach (Blattodea: Blaberidae)
Pycnoscelus surinamensis (Linnaeus), Surinam cockroach
Mealybug (Homoptera: Pseudococcidae)
Dysmicoccus brevipes (Cockerell), pineapple mealybug
Ants (Hymenoptera: Formicidae)
Brachymyrmex obscurior Forel
Hypoponera opaciceps (Mayr)
Odontomachus ruginodis Wheeler
Paratrechina longicornis (Latreille), crazy ant
Paratrechina pubens (Forel)
Pheidole morerens Wheeler
Snails (Mollusca)
Lamellaxis gracilis (Hutton)
Polygyra cf. *P. cereolus* (Muhlfeld)
Praticolella griseola (Pfeiffer)
Succinea cf. *S. luteola floridana* Pilsbry

Although some of these species are native to the Puerto Rican Bank, most are immigrant species that are now widespread in the Caribbean region, including southern Florida (Godan 1983, Roth 1994). Most are known from the Puerto Rican Bank (Wolcott 1950-1951). Several major agricultural pests are included, such as those with common names listed. The presence of this many invertebrates on this shipment indicates the ease of dispersal of agricultural pests.

Non-indigenous pests are a major problem for North American agriculture (Dowell & Krass 1992, Sailer 1978, 1983, U.S Congress 1993). In addition to being agricultural pests, non-indigenous insects and snails appear to be the primary cause of extinction for native invertebrates on islands (e.g., Howarth 1990, Howarth & Ramsay 1991). Vectors of human disease, such as *Aedes albopictus* (Skuse) (Asian tiger mosquito), can also be spread by commerce (e.g., Francy et al. 1990, Mitchell et al. 1992). The recent spread of two giant African snails, *Achatina fulica* Bowditch and *Limicolaria aurora* (Jay), to Martinique is a stark example of the problem of continued pest dispersal (Mead & Palcy 1992).

Given the threat that non-indigenous insects and snails present to agriculture, human health, and conservation management, and potential economic consequences of such introductions, island governments should create and implement policies for the

inspection of agricultural materials, including provisions for fumigation and quarantine as necessary.

Identifications were made by K. Emberton (Academy of Natural Sciences of Philadelphia, snails), D.R. Miller (Systematic Entomology Laboratory, U.S. Dept. of Agriculture, mealybug), R.R. Snelling (Natural History Museum of Los Angeles County, ants), and J. Strazanac (Bishop Museum, cockroach). Voucher specimens were retained by specialists, except snails.

SUMMARY

A large shipment of potted plants from Florida to the British Virgin Islands included live cockroaches (1 species), mealybugs (1 species), ants (6 species), and snails (4 species) on arrival at the destination, Guana Island. Several major agricultural pests were included, emphasizing the need for more effective measures to prevent continued spread of non-indigenous invertebrates.

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