TOURIST ANTS

There are a number of species of ants, particularly tropical species, which have become widely distributed yet there are astonishingly few records of ants actually found on ships. This does not indicate, of course, that few ants travel on the ships themselves but rather that seldom are they collected, identified, and the records published. The records include:

*Poner"a punctatissima* Rog. S. S. Chenab between Trinidad and Cuba (Myers, '34).

*Monomorium pharaonis* L. Ship from West Africa (Forel, '01); S. S. Korona, British Guiana (Wheeler, '16); Ship on the Rio Negro and R. Branco and S. S. Bahia; on the Rio Amazon, Brazil (Bequaert, '36); S. S. Chenab between Trinidad and Cuba (Myers, '34); S. S. Inca in the Patagonian Canal at Aysén, Chile (Goetsch and Menozzi, '35).

*Monomorium destructor* (Jerd.). S. S. Colombia, between San Francisco and Baltimore via the Panama Canal (Clarke, '22).

*Paratrechina longicornis* Latr. S. S. Silesia (Wheeler, '06); S. S. Korona, British Guiana (Wheeler, '16); S. S. Chenab between Trinidad and Cuba (Myers, '34).


There are more records of ants found in soil about plants and in merchandise which have been intercepted by quarantine officers at the docks or later found established in places such as greenhouses and botanical gardens. Still another manner of introduction is indicated by finding in September, 1933, in luggage in Cambridge, Mass., several days after my return from Cuba, workers of the tropical *Monomorium destructor*. The voyage was made on the S. S. Veragua but ants were not seen on the ship. It is most probable that the ants were acquired in my hotel in Havana, where they were abundant.

Forel (see Donisthorpe, '27) lists the following as the eleven cosmopolitan ants introduced by shipping: *Odontomachus haematoda* L.; *Pheidole megacephala* F.; *Monomorium pharaonis* L.; *Monomorium floricola* (Jerd.); *Monomorium destructor* (Jerd.); *Solenopsis geminata* F.; *Tetramorium guineense* F.; *Tetramorium similim"um* F. Smith; *Tapinoma melanocephalum* F.; *Paratrechina longicornis* Latr.; *Paratrechina vivida"la* NyL.

These are such inveterate globe trotters as to be found on nearly every island in the warmer regions of the world and on every continent except the Antarctic. Their method of dispersal usually is not exactly known but generally they are assumed to be carried "in commerce" from port to port. These cosmopolites consequently are found first in seaports and they may or may not be able to invade the country. *M. pharaonis* has penetrated even to the central part of North America where it was abundant last winter in Grand Forks, N. D. It has evidently been established in offices and other buildings in Grand Forks for a number of years. Temperatures here in the winter of -20° to -30° F. are not uncommon and -40° was recorded in 1936. According to Dr. A. E. Emerson *M. pharaonis* became a pest in the Michael Reese Hospital, Chicago, Ill., from 1929 to 1933, and I was shown specimens at the University of Minnesota from Rochester and Minneapolis, Minn. Factors governing the establishment of these cosmopolites in alien lands include climate, available food, etc., but above all an adaptability which seems to be specific, and in *Monomorium*, generic. As a rule it is the small to minute species which are most successful but *Odontomachus haematoduza* is a large and conspicuous exception. Sometimes, as in such small islands as Bermuda and some of the Lesser Antilles, the introduced ants drive out most of the indigenous ant fauna. An introduced ant may even drive out an earlier migrant as *Iridomyrmex humilis* Mayr.; a South American ant, drove out *Pheidole megacephala* from Madeira (Wheeler, '06).
During various voyages in the American Tropics, I have been interested in ants which were found to be fellow passengers, even cabin mates, and the following are these records:

7. Monomorium pharaonis (L.) – S. S. Lady Drake, XI.34, between Boston and Trini-
   dad; S. S. Lady Hawkins, 9.VIII.36, between Trinidad and British Guiana; S. S. Van Rensselaer, 5.VI.36, between Trinidad and British Guiana; S. S. Oranje
   Nassau, X.36, between British Guiana and New York; S. S. Ceroigo, between
   Buenaventura, Colombia and Panama, 11.VIII.38. Also a United Fruit Co.
   steamship, X.38, between New Orleans and Honduras, in cabin (D. E. Farringer).
   Cosmopolitan species.
    Cosmopolitan species.
    Cosmopolitan species.
10. Tetramorium simillimum (F. Smith) – S. S. Apure, 22.I.35, Orinoco River, Vene-
     zuela. Cosmopolitan species.
11. Cryptocerus (Hypocryptocerus) sp – S. S. Apure, 22.I.35, Orinoco River, Vene-
     zuela. Neotropical species.
13. Tapinoma melanocephalum (Fabr.) – S. S. Apure, 22.I.35, Orinoco River, Vene-
     zuela. S. S. Bisra, 13.VI.36, Essequibo River, British Guiana. S. S. Ancon,
     Cosmopolitan species.
16. Paratrechina (Nylanderia) vividula NyI. – S. S. Apure, 22.I.35, Orinoco River,
     Venezuela. Cosmopolitan species.

Seven of these sixteen species are not cosmopolitan ants but are confined to the Neotropical Region. Their presence, all on the S. S. Apure, is accounted for below. The S. S. Apure also carried seven of the eleven cosmopolitan species and two additional species (Monomorium pharaonis and Pheidole megacephala) may well have been carried but not seen on the two passages.

Of the well-known cosmopolitan ants, only two, Monomorium destructor and Pheidole megacephala, were not found on these voyages and I have mentioned M. destructor as found in luggage upon returning from Cuba.

The S. S. Apure is a stern paddle-wheel steamer plying between Port-of-Spain, Trinidad, B. W. I. and Ciudad Bolivar on the Orinoco River, Venezuela. Stops are made at several points along the river and in the Delta for fuel, which is wood gathered by Indians from the practically unbroken rain forest. Of the ants recorded
from this ship Solenopsis geminata, Tetramorium guineense, T. simillimum, Tapinoma melanocephalum and Paratrechina longicornis appeared to be regular inhabitants and were found in my cabin as well as in various parts of the ship. The other ants were taken mostly near the boilers on the floor or on the wood stacked nearby. They undoubtedly were acquired with the wood, in which most could have been nesting. The Neoponeira stung me painfully, and with the Odontomachus were avoided by the bare-footed and barelegged stokers. Additional inhabitants or travellers on the ship included the ubiquitous cockroaches, Trichoptera, Coleoptera, especially Rhynchota, Lepidoptera (moths), several species of Tabanidae and hordes of mosquitoes as we passed through the Delta.

The S. S. Biara is another stern paddle-wheel steamer operating from Georgetown, British Guiana along the coast to the mouth of the Essequibo River, largest river of the colony, and up the river to Bartica, at the junction with the combined Mazaruni-Guyuni rivers. The Tapinoma and Paratrechina workers were abundant, taking particles of food from the vicinity of the dining table, and generally over-running the ship. One Monomorium worker was taken from my plate at the dining table, another from my arm on the dock.

The S. S. Lady Drake and Lady Hawkins operate between Halifax, Boston, Bermuda the British Lesser Antilles, Trinidad and British Guiana. The S. S. Rensellaer and Oranje Nassau operate between North European ports, Madeira, from Surinam to Puerto Cabello on the Venezuelan coast, Curacao, Haiti and New York. The S. S. Corigo operates between Ecuador, Pacific ports of Colombia, Panama (Canal Zone) and occasionally to Atlantic ports of Colombia. Monomorium pharaonis workers were present in variable numbers in the cabins of these ships. Commonly, when they were abundant, workers would form long files up and over the washbasin to the faucet where they drank water. On the Corigo they even explored the berths and were suspected of stinging. An unusual insect on this latter ship was a fruit-fly (Trypetidae) which probably emerged from fruit on the ship. A large dragon-fly (Odonata: Anisoptera) was also seen but flew off towards the Colombian mainland, probably 25-50 miles away.

I have been told by officers of some ships that the fumigation the ships occasionally receive keeps the ants down only a voyage or two, when they may again become conspicuous. The fumigation may kill only the workers foraging about; the queen or queens, well hidden in crevices, may escape and in a few weeks produce another brood.

These ants recorded above came on the ship in various ways, probably in cargo or passenger luggage. Some may emigrate passengers and walk on over the gangplank, as they could easily at the Orinoco stops of the S. S. Apure, where the simple plank was laid down on the sandy beach with the dense forest but a few feet away. Ants of some cosmopolitan species are commonly found in warehouses on the docks. If cargo stands long enough it would be simple for colonies to become established in it and later carried into the ship. All of the cosmopolitan species and many others show remarkable versatility in nesting habits. I have personally found ant colonies nesting in walking sticks, teapots, between the leaves of books, bureau drawers, containers of all kinds and, in general, almost any place which is small and largely covered. Worker ants scurry about on anything left even momentarily on the docks but they are not particularly significant since they do not reproduce themselves.

Summary

Sixteen species of ants were taken on ships in the American Tropics. Of the sixteen, nine are well known ants which are widely distributed in the tropical and
warm temperate regions of the world. Two other kinds not found on these ships with the above nine constitute the eleven cosmopolitan species of ants; one of these two was found in luggage in the U. S. upon return from Cuba.

Monomorium pharaonis was taken on six ships. This species and Paratrechina longicornis are probably the most common ship ants and may be expected on any vessels visiting ports in warm regions.

A single ship carried seven of the eleven species of cosmopolitan ants; five of these appeared to be regular inhabitants.

... Worker ants are regularly carried into ships in cargo and passenger luggage. Since they do not reproduce themselves they are a nuisance only during their lifetime. But when a queen is carried in cargo, a colony may become established on the ship or deposited with the cargo in an alien port. Factors governing the establishment of ants in alien lands include climate, available food, etc., but, above all, an adaptability which seems to be specific, and, in Monomorium, generic.

Literature Cited


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