

Notas & Comunicações

Eco-Entomological observations from the Amazon : III. How do leafcutting ants of inundation forests survive flooding ?

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Many leafcutting *Acromyrmex* ants of Brazil live in subterranean nests of dry land areas (Gonçalves 1961). In Trinidad, *Acromyrmex octospinosus* (Reich) is reported to move its nest to higher and drier sites in cultivated fields if the soil becomes flooded during the wet season (Lewis 1975). *Acromyrmex lundii carli* Santschi(?) is now recorded for the first time to inhabit a white-water inundation forest (= "Várzea"), which is flooded for at least six months and up to 6 m height (comp. Adis 1981). During the non-flooded period (September—February), *A. lundii carli* was found building subterranean nests on Ilha de Marchantaria (59°58'W, 3°15'S), the first island upstream from Manaus on the Rio Solimões. More than twenty nests were located along a walkway of 2,5 km in the forest. The ants were observed to cut leaves principally of *Caesaria pitumba* Sleumer (Flacourtiaceae). They also walked up to the edge of the forest (distance: 20-30 m), where they cut leaves of *C. aculeata* Jacq. and transported them to their nests. With the beginning of forest inundation (in March), nests were moved to hollow boughs in the lower canopy area or into the upper and non-flooded part of dead tree trunks. In the latter case, *A. lundii carli* had to procure leaves on surrounding trees. The ants were observed to "walk" on the water surface to nearby trunks. If present, aquatic macrophytes like *Pistia stratiotes* L. were used as "bridges". Upon reaching a trunk, the ants tried to climb

it, cut leaves in the lower canopy and transported them back to their nest.

During maximum flood (in June/July), the surface current in the forest reached 250 m/h. *A. lundii carli* now had to swim actively to adjacent trees. On this occasion, many ants were eaten by fish, especially *Tripotherus angulatus* (= "sardinha"; Characidae). The dark shape of trunks on the horizon of the water surface presumably served for orientation, as occurs in other insects (Irmiler 1973, Schaller 1969). If an ant was taken along with the current and could not reach the trunk aimed at, it stopped swimming until a new trunk was spotted.

Most subterranean nests were destroyed during forest inundation and *A. lundii carli* had to build new ones after returning to the forest floor at the beginning of the non-flooded period.

Resumo

Reações às inundações anuais de até seis meses são referidas para *Acromyrmex lundii carli* de uma floresta inundável nas regiões da água branca (Rio Solimões). Observações sobre a preferência de folhas são dadas.

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(2) — Identification by Dr. R. Snelling, Los Angeles County Museum, USA; voucher specimens deposited in the Systematic Entomology Collections of INPA, Manaus, AM, Brazil.

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