more potent condition or affinity is in its full play, the feebler one is less apparent; and *vice versa.* Thus, when the temperature is best suited to any given species, soil is of little moment; but when the temperature barely suffices, then soil may determine even the existence of the species.

"IV. Comparing these conditions with each other, the influence of temperature (being less local) is chiefly shown in the flora of a country; while other conditions (often partial in their sway) may not at all affect the flora of a considerable tract, and yet greatly modify its vegetation; the latter term having reference to the comparative prevalence, the former to the mere existence, of the *species.*

"V. Comparing one species with another, some are more influenced by one, some by another of the above conditions. Some, for example, have a wide range of temperature, others are indifferent to soil or moisture.

"VI. With regard to subjacent rocks, their influence is so frequently veiled by the other conditions, that for the most part the flora of a country is not obviously affected thereby, though the vegetation of small tracts may evidently betray it."

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Eville Gorham

Botany Department,
University College,
London, England

THE OCCURRENCE OF A MAYFLY NYMPH IN BRACKISH WATER

Circumstantial evidence has been available for some time indicating that the nymphs of *Callibaetis floridanus* Banks may inhabit brackish water (Berner 1950); however, no salinity determinations were made to substantiate this evidence. In 1949, the senior investigator collected nymphs of this species of mayfly from around the roots of the red mangrove, *Rhizophora mangle* L., south of Homestead, Florida. Because of the flooded conditions in the Florida Everglades, the water around the tree at that time was definitely fresh.

The junior investigator, while studying the insect fauna of Homosassa Springs, which empties into the Gulf of Mexico north of Tampa, Florida, found that the nymphs of this species were present in water which appeared to be definitely brackish. Further investigation and analysis of the water proved that the insect can tolerate rather high salinities.

The collecting stations from which the nymphs came are approximately one mile inland from the Gulf and are subject to tidal fluctuations. At low tide, chloride values in parts per thousand at the collecting sites were 2.13 (3.92 total salinity) and at three hours past high tide 4.43 (8.15 total salinity). It is estimated that at the peak of high tide the salinity must be somewhere near 10 parts per thousand. Dissolved oxygen ranged from a minimum of 4.62 to a high of 7.02 parts per million.

The nymphs were found on the leaves of the aquatic plants *Potomogeton pectinatus* L. and *Vallisneria neotropicalis* M.-V. No other mayfly species were encountered although nymphs of the damselflies *Ischnura ramburii* (Selys), *Enallagma durum* (Hagen) and *E. pollutum* (Hagen), larvae of Tendipedidae and Heleidae, and the water striders *Trochopus plumbeus* (Uhler), *Mesovelia mulsanti* White, *Trepobates floridensis* Drake and Harris, and *Rheumatobates tenuipes* Meinert were found associated with the mayfly nymphs.

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Lewis Berner
William C. Sloan[1]

Department of Biology,
University of Florida,
Gainesville, Florida

[1] The studies of the junior investigator were aided by a contract between the Office of Naval Research, Department of the Navy, and the University of Florida (NR 163-106).