RECORDS FOR THE ROSEMARY GRASSHOPPER,
SCISTOCERCA CERATIOLA HUBBELL AND WALKER,
IN NORTH FLORIDA (ORTHOPTERA: ACRIDIDAE)

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Hubbell & Walker (1928) described the rosemary grasshopper, *Schistocerca ceratiola*, based on collections from Orlando (TYPE LOCALITY) and Apopka in Orange County, Altamonte Springs in Seminole County, and Tavares in Lake County. Their specimens were found in association with rosemary bushes, *Ceratiola ericoides*, growing in "sand scrub" habitats. Dirsh (1974) provided a distribution map that called attention to additional records from Hernando, Marion, Polk, Putnam, and Volusia counties. The northernmost records shown on this map included two sites near Palatka along the St. John River in Putnam County and two sites near Ocala in Marion County.

On 1 September 1983, Robert E. Woodruff and one of us (RF) obtained a large series of this grasshopper on rosemary bushes at the Breezeway Pond site in the Smith Lake Sand Hill area of the Katharine Ordway Preserve-Swisher Memorial Sanctuary, near Melrose, Putnam County, Florida. Grasshoppers were found in association with an Evergreen Shrub habitat, characterized by rosemary, *Myrica cerifera*, *Lyonia lucida*, *Ilex glabra*, and *Vaccinium arboreum*. This peculiar habitat forms narrow bands around the Breezeway Pond and other temporary and permanent clear water ponds and lakes on the property. Voucher specimens from this infestation are deposited in the Florida State Collection of Arthropods (FSCA), Gainesville, Florida.

Subsequent searches for these grasshoppers on rosemary bushes at the Preserve, near Johnson in Putnam County, and in the vicinity of Gold Head Branch State Park and Keystone Heights in southwestern Clay County (approximately 14 km N of the Preserve) in 1984 showed this distinctive grasshopper to be extremely common on southern Trail Ridge and the adjoining, but more southerly, Interlachen Karstic Highland in the northcentral portion of the Florida peninsula. Although these records only extend the known range of *S. ceratiola* about 35 km NW of the Palatka and 80 km NNE of the Ocala collections, they place this unusual grasshopper on the geologically unique Trail Ridge. This feature, developed as a series of N-S trending sand ridges that parallel the western shore of the St. Johns River, extends southward from southeastern Georgia and merges with the xeric Interlachen Karstic Highland near the town of Interlachen. These droughty ridges are forested with upland communities dominated by High Pine habitats and are isolated from reported sites near Palatka and Ocala by wetter flatwoods habitats that lack rosemary plants.

Between 1985-1986, we located additional sites (see SPECIFIC RECORDS) for this grasshopper in Lake, Marion, and Orange counties. Efforts to collect grasshoppers at appropriate sites in Bay, Franklin, and Gulf counties were unsuccessful. We revisited rosemary sites examined by Hubbell and Walker in Alachua (near Archer) and Levy (Cedar Keys) counties and, like them, failed to locate specimens.

We found *S. ceratiola* only in association with rosemary bushes. At Gold Head Branch State Park in Clay County and sites in Putnam County, grasshoppers occurred in areas of High Pine (or Sandhill) vegetation while those from the Ocala National Forest in Lake County, and from Rock Springs and Mt. Plymouth in Orange County were at sites dominated by Sand Pine Scrub.
Hubbell & Walker (1928) indicated that this species was chiefly nocturnal, but it was our experience that nymphs were active among the leaves at the ends of branches throughout the day and night. Adults most often positioned themselves on the woody stems of the bushes' interiors during the day and moved to the outer ends at night. Both nymphs and adults were extremely cryptic in their chosen daytime positions. The nymphs' green bodies and yellow stripes blended well with the yellowish-green leaves of the rosemary while the grayish-brown coloration of the adults matched that of the woody branches. Copulations were noted during the daylight hours as well as after dark, contrary to the observation of Hubbell & Walker (1928).

On the Ordway Preserve, we first noticed nymphs of *S. ceratiola* during the first week of June when they were but 4-6mm in length. Adults first appeared in mid-July, while nymphs continued on the bushes until mid-September. Adults, including copulating pairs, were noted as late as 7 November (1986) in Putnam and Clay counties.


**REFERENCES CITED**
