

## Neurocordulia alabamensis Alabama Shadowdragon

DISTRIBUTION: Ranges across the southwestern 40-50% of the Coastal Plain, including the Sandhills region; seemingly absent from the Piedmont. As NC lies at the northeastern end of the range, the northern limits at present are Montgomery, Moore, Lee, Johnston, and Edgecombe counties. There have been one or two reports from the lower Piedmont, but there are seemingly no specimens or photographs to document its presence in that province as yet.

ABUNDANCE: Very difficult to assess for all five shadowdragons in NC because of their crepuscular habits. As it has been found in practically all potential counties in NC within its range, it must not be truly scarce, and the nearly 60 records (for a crepuscular species) with available dates attest to it not being rare. Dunkle (2000) calls the species "common but seldom seen" across its full range, which might apply as well to NC. Likely, it is uncommon to fairly common in the Sandhills region, and rare to uncommon elsewhere in the southern Coastal Plain, but especially scarce in the central Coastal Plain.

FLIGHT: The flight is from mid-May to late August, though most do not appear until mid-June, and the peak is from late June to mid-July.

HABITAT: Small creeks in forested regions, often where sandy and with low flow.

BEHAVIOR: Strictly crepuscular, with most flying taking place about 30 minutes before dusk. It spends the remainder of the day hanging on twigs in shade in forests, where very seldom seen. When it does fly, it can be seen over ponds as well as creeks.

Kittelberger and Bockhahn (2020) observed the behavior of two females and a putative male at Bones Fork, the tannic outflow creek of Lake Bagget in Richmond County. Females flew in a tight circle inches above the water in a jittery cranefly-like flight, whereas the male flew longer beats up and down the creek at a greater height (6-12 inches). The entire flight lasted only 19 minutes, from 8:20 - 8:39pm.

COMMENTS: To see shadowdragons, observers must visit creeks and other bodies of water in shaded places during the last hour of daylight, with a net handy to catch whatever may be seen flying over the water. In fact, Dunkle (2000) calls this species "One of the world's most elusive dragonflies" because of its very narrow flight time during the day, often for just 10-20 minutes near dusk. Though it is not rare in the state, it is poorly known by today's biologists/observers, and the N.C. Natural Heritage Program retains the species on its Watch List.