

NEW DISTRIBUTIONAL RECORDS FOR THE ANT  
GENUS *SMITHISTRUMA* (HYMENOPTERA: FORMICIDAE) IN THE  
SOUTHERN UNITED STATES

WILLIAM P. MACKAY AND ROBERT S. ANDERSON

Laboratory for Environmental Biology, Department of Biological Sciences,  
The University of Texas, El Paso, TX 79968 (WPM)  
Canadian Museum of Nature, Ottawa, Ontario, Canada K1P 6P4 (RSA)

The genus *Smithistruma* consists of a group of small, cryptic ant species which inhabit litter in mesic forests throughout the world. Most specimens are collected by extracting leaf litter in Berlese funnels. They are predators in the litter, especially of collembolans (Dejean, 1988). Fortunately they are taxonomically well known (Brown, 1964; Ward, 1988). Comments on general distribution for the species listed below are from Smith (1979).

Most of the ants were collected by sifting mesic forest leaf litter from each of the listed localities through a sieve with 1.25-cm mesh and then extracting the insects by using Berlese funnels. Specimens were preserved in 70% ethanol. These records were supplemented by specimens in the collection of WPM, which were hand collected. Voucher specimens for all records are deposited in the museum of the Laboratory for Environmental Biology of the University of Texas at El Paso. A total of 10 species and 383 specimens (363 workers, 20 females) were collected. In the following species accounts, numbers of worker and female specimens (separated by commas) are given in parentheses.

*Smithistruma angulata* (Smith). ARKANSAS: Cross Co., Village Creek State Park (1, 0). This is the first record for Arkansas; other records are from Illinois, Alabama and Mississippi.

*S. bunki* Brown. MISSISSIPPI: Oktibbeha Co., Dorman Lake (2, 0). Previous records are from Georgia, Florida, Mississippi and Louisiana.

*S. clypeata* (Roger). ARKANSAS: Cross Co., Village Creek State Park (3, 0). TEXAS: Houston Co., Big Slough Wilderness (2, 0); Polk Co., Big Thicket National Preserve (1, 0); Sabine Co., 14 km E Hemphill (1, 0); 14.5 km E Hemphill (2, 1); Walker Co., Huntsville State Park (1, 0). This species is distributed throughout eastern United States, previously reported as far west as Arkansas and Louisiana; these are the first records from Texas.

*S. laevinasis* (Smith). ARKANSAS: Pike Co., Crater of Diamonds State Park (0, 2). TEXAS: Houston Co., Big Slough Wilderness (1, 0); Walker Co., Huntsville State Park (0, 1). This species is found throughout eastern United States, previously reported as far west as Alabama and Mississippi; these are the first records for Arkansas and Texas.

*S. ohioensis* (Kennedy and Schramm). ARKANSAS: Cross Co., Village Creek State Park (8, 0). TEXAS: Houston Co., Big Slough Wilderness (125, 7); Sabine Co., 14 km E Hemphill (4, 0). This is an eastern United States species, reported as far west as Arkansas and Louisiana; these are the first records from Texas.

*S. ornata* (Mayr). ARKANSAS: Cross Co., Village Creek State Park (5, 2); Pike Co., Crater of Diamonds State Park (4, 0). MISSISSIPPI: Oktibbeha Co., Dorman Lake (1, 0); Winston Co., Louisville (1, 0). TEXAS: Houston Co., Big Slough Wilderness (10, 1); Polk Co., Big Thicket Natural Preserve (1, 0); Sabine Co., 14 km E Hemphill (3, 0); 14.5 km E Hemphill (1, 0); Walker Co., Huntsville State Park (2, 0). This is a common species throughout eastern United States, occurring as far west as Oklahoma and Texas.

*S. pilinasis* (Forel). MISSISSIPPI: Oktibbeha Co., Dorman Lake (4, 0). This is an eastern species, occurring as far south as Arkansas and Louisiana. This is the first record from Mississippi.

*S. pulchella* (Emery). MISSISSIPPI: George Co., Lucedale (1, 0). Lowndes Co., Columbus (1, 0). OHIO: Mahoning Co., 6 km S Lowellville. This species is found throughout eastern United States, as far south as Louisiana; this is the first record from Mississippi.

*S. reflexa* Wesson and Wesson. ARKANSAS: Cross Co., Village Creek State Park (4, 0). TEXAS: Houston Co., Big Slough Wilderness (120, 2); Polk Co., Big Thicket Natural Preserve (3,

0); Sabine Co., 14 km E Hemphill (1, 0), 14.5 km E Hemphill (5, 1); Tyler Co., Spurger (1, 0). This species is from eastern United States, previously reported as far south and west as Alabama; these are the first records from Arkansas and Texas.

*S. rostrata* (Emery). ARKANSAS: Cross Co., Village Creek State Park (17, 0). MISSISSIPPI: Oktibbeha Co., Noxubee Ref. (1, 0). TEXAS: Houston Co., Big Slough Wilderness (1, 0); Polk Co., Big Thicket Natural Preserve (1, 0); Sabine Co., 14 km E Hemphill (11, 2), 14.5 km E Hemphill (13, 2); Tyler Co., Big Thicket Natural Preserve (0, 1). This is an eastern United States species, previously reported as far west as Louisiana; these are the first records for Arkansas and Texas.

This research was supported by the University Research Institute of the University of Texas.

#### LITERATURE CITED

- BROWN, W. L. 1964. The ant genus *Smithistruma*: a first supplement to the world revision. *Trans. Amer. Entomol. Soc.*, 89:183-200.
- DEJEAN, A. 1988. Determination of the hunting strategy in the genus *Smithistruma* (Formicidae, Myrmicinae) by the kind of prey. *Behav. Process.*, 16:111-125.
- SMITH, D. R. 1979. Superfamily Formicoidea, family Formicidae. Pp. 1323-1467, in *Catalog of Hymenoptera in America north of Mexico*, Vol. 2. (K. Krombein, P. Hurd, D. Smith and B. Burks, eds.). Smithsonian Institution Press, Washington, D.C.
- WARD, P. 1988. Mesic elements in the western Nearctic ant fauna: taxonomic and biological notes on *Amblyopone*, *Proceratium* and *Smithistruma* (Hymenoptera: Formicidae). *J. Kans. Entomol. Soc.*, 61:102-124.