Research Note

SCUTIGERELLA IMMACULATA *(NEWPORT), THE SYMPHYLID IN PINEAPPLE FIELDS OF PUERTO RICO (1)*

Symphylids are an occasional pest of pineapple in Hawaii and also in Puerto Rico. They are controlled by soil fumigation, primarily applied for nematode control and, where necessary, by insecticide applications to the soil (2). These close relatives of insects were reported damaging pineapple roots during the late 1920's[3,4]. During the 1930's it became clear that a problem existed when areas of depressed growth began to appear and plants in these areas were found to be heavily infested with symphylids in the root zone.

The symphylans[5,6] are slender, whitish myriapods, 1 to 8 mm long, with 15 to 22 (usually 15) body segments and 10 to 12 pairs of legs. The antennae are slender and polisegmented. The head is well developed and distinct. The genital openings are located near the anterior end of the body. The symnphylans occur in humus soil, under stones, and in decaying wood, and in other damp places.

One of the reported damaging species of symphylans is *Scutigerella immaculata* (Newport). It is an occasional pest in greenhouses[5,6] and is a well-known crop pest in many parts of the world, often referred to as the garden centipede[7]. Three species have been identified in pineapple fields in Hawaii as follows: *Symphylella tenella* Scheller, *Scutigerella sakimurai* Scheller, and *Hanseniella unguiculata* (Hans). *H. unguiculata* is a root feeder, *S. tenella* a scavenger, and *S. sakimurai* a suspected root feeder[8,9].

In recent years symphylid populations have been reported causing damage to the root hairs of pineapple and some authorities consider symphylans a severe problem to this crop. The species of symphylids first reported by Sein[10] for pineapple in Puerto Rico was *Hanseniella* spp. It was later reported as *Scutigerella inmaculata* (Newport), but no record of its identification is available. A survey was conducted recently on four farms located in the Arecibo and Barceloneta areas to determine the species present. The survey was made in March 1987 with the collaboration of Walter Gandía (Pineapple Program Land Authority).

Fourteen plants at Las Claras, Arecibo,

[1]Manuscript submitted to Editorial Board 13 May 1988.

[2]Beardsley, J. W. 1987. Personal communication. Dept. Entomol. Univ. Hawaii at Manoa.

[3]Illingworth, J. F. 1927. Symphylids destructive to the roots of pineapple. *Pine News* 1: 88–91.

[4]Godfrey, G. H. and J. F. Illingworth, 1928. On the failure of new plants to become established. *Pine News* 2: 88–94.

[5]Michelbacher, A. E. 1938. The biology of the garden centipede, *Scutigerella immaculata. Hilgardia.* Vol. 11(3): 73–141.

[6]Borror, J. D., D. M. Delong, and C. A. Triplehorn, 1976. An introduction to the study of insects. 4th ed. 133–35.

[7]Williams, E. C. 1987. Personal communication. Wabash College, Crawfordsville, Indiana.

[8]Sakimura, K. 1961. The biology of symphylids in pineapple fields. **Res. Rept.** 86: 95–91.

[9]Scheller, U. 1961. Studies on the symphylid fauna of the Hawaiian Islands. *Proc. Hawaii Entomol. Soc.* 17: 443–56.

[10]Wolcott, G. N., 1948. The insects of Puerto Rico. *J. Agric. Univ. P.R.* 32 (1): 15.

and 9 at Higüerito, Barceloneta (both places with drainage problems) were pulled out and shaken over a black plastic bag for root examination. Thirty-one specimens from Arecibo and 37 from Barceloneta were collected in vials containing 70% alcohol. Specimens were identified as *Scutigerella immaculata* (Newport) by Dr. Eliot C. Williams, Professor Emeritus of Biology, Wabash College, Crawfordsville, Indiana.

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