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Short Communication

SYMPHYLIDS IN ROSES OF ECUADOR

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ABSTRACT

A collection of arthropodos was made in Tabacumdo- Pichincha- Ecuador. Scouting was performed in 70 hectares of roses under greenhouse production system. Keys to the identification of order level were used. Symphylids presented oval- shape head, long filiform antennae, size of the body, 3-3.5mm. More information is needed about the species of symphylids affecting roses in Ecuador.

Keywords: Symphylids, Myriapoda, *Scutigerella* spp.

INTRODUCTION

Flower business is one of the highest revenue producers in the agricultural and agro-industrial sector of Ecuador. Flowers are considered the first non-traditional export product and the fourth largest in importance due to the high level of income contributing in average to 51% of non-oil exports of the country [1]. Ecuadorian flowers are exported every day to more than 180 countries around the world.

Among the production problems affecting greenhouses of ornamental plants, pests and diseases are the cause of important economic losses. Powdery mildew caused by *Sphaerotheca pannosa* is considered as the most destructive disease in roses of Ecuador. Other pathogens such as *Peronospora sparsa* and *Botrytis cinerea* have high economic importance in the agro-industry of ornamentals of the country [2]. Aphids and mites are the most common arthropod pests on roses.

Symphylids (Animalia: Arthropoda: Myriapoda) are serious agricultural pests with economic thresholds as lower as one individual per square meter in ornamental crops [3] and vegetables [4]. Little is known about the effect of myriapod-like animals on rose production.

A collection of individuals was made in the Andean zone of Ecuador in Tabacundo 0.0411°N, 78.2077°W at 2800 above the sea level. Scouting of soils pests was performed in commercial greenhouses of roses over 70 ha of the plantation. Sampling consisted of 20 soil cores in transects using a soil bore of 4 cm of diameter. Soil samples were diluted with tap water using a bucket of 5 L of capacity.

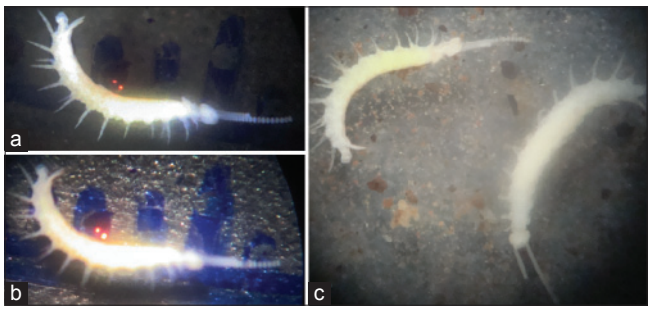

Fig. 1: Symphylids collected in a flower company of Ecuador. (a) Segments of the antennae, (b) average size 3-3.5 mm, (c) Arthropodos collected in freedom rose variety

Individuals were picked using an eyeliner brush and placed in Petri dishes with distilled water. Immediately after collection, the animals were observed using a stereomicroscope. Morphology of the animals observed was: Head; the animals presented an oval-shaped head. Long filiform-like antennae (approximately 20 segments) (Fig. 1a). The size of the body, except the antennae, was 3-3.5 mm (Fig. 1b).

Symphylids are significant root feeding pests that can cause high levels of infestation and could reduce significantly the production of vegetable crops [4]. These white-cream animals are difficult to found and very rare pest. Over the 70 ha of the plantation, symphylids were detected in 1 ha of roses, of 2 years after planting, belonging to the variety freedom.

Although the incidence of the pest was very low, there was a high level of infestation in the spot of soil where the animals were detected. Therefore, the technical decision was to eradicate the plants to avoid further infestations of adjacent greenhouses.

Symphylans of the genus *Scutigerella* have been reported in flower companies of Colombia by Salazar-Moncada [5]. The more information is needed about the species of symphylids affecting rose plants in commercial greenhouses of Ecuador.

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