

Kondo, T. and Kawai, S. (1995) Scale insects (Homoptera: Coccoidea) on mango in Colombia. Japan Journal of Tropical Agriculture, 39: 57–58. Extra Issue 1. Tokyo University of Agriculture. Tokyo, Japan.

Paper No.29

Scale insects (Homoptera: Coccoidea) on mango in Colombia

*Takumasa KONDO and Shozo KAWAI (Fac. Of Agri. Tokyo Univ. of Agri.)

Mango is a plant native to India and the Myanmar (Burma) region. It is believed that mango was introduced into the New World during the 16th century via two routes; one route from the Philippines into Mexico and one from Africa into Brazil. In Colombia mango began to be grown commercially in the 19th century, and now is the second most important fruit in the country only second to Bananas. The yearly production of mango in Colombia is estimated at 4000 Tons.

In Colombia, scale insects are the second most important pests of mango following the fruit flies. There are hitherto 24 species of scale insects described on mango in Colombia, however little is known about the total scale insect fauna on mango in Colombia and their life histories. (For these reasons), on January 1995, a faunistic study of the scale insects including their pest status was carried out in the States of Tolima and Valle in the Republic of Colombia.

As a result, 13 species in 12 genera in 4 families were found, increasing the number of scale insects reported on mango in Colombia to 28 species in 22 genera and 5 families (Table 1). The scale insect faunal composition consists of armored scales, which made up more than half of the species number; followed by many species of soft scales and very few mealybugs. The low number of mealybugs on mango is in contrast to other mango growing areas where the number of mealybugs commonly surpasses the number of soft scales.

The scale insects found on mango in Colombia are mostly cosmopolitan species. Within the scale insects found on mango in Colombia, infestations of *Aulacaspis tubercularis* and *Ischnaspis longirostris* were most conspicuous. *A. tubercularis* was especially common in both States of Tolima and Valle, whereas *I. longirostris* was more common in Valle State. *Ischnaspis longirostris* was not collected in Tolima State, but instead *Pseudaonidia trilobitiformis* was commonly found feeding on the median vein of the leaves. On the perimeters of a mango orchard, a species of *Icerya* was found in localized outbreaks.

Among the scale insects collected in the present study, 3 species are new to the scale insect fauna of Colombia. *Mycetaspis personata* collected in Cali is thought to be New World in origin; however, this is the first time in which it is reported from Colombia. The other two newly recorded species in Colombia are

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Parlatoreopsis sp. and *Andaspis hawaiiensis*. These two scale insects are small in size and tend to burrow under the tree bark, making them hard to detect. However, there is a high chance that these species can cause great damage in

an outbreak situation. Furthermore, 3 species were newly recorded on mango. One of them is *Orthezia* sp. collected in Palmira city. This *Orthezia* species is thought to be *O. praelonga*, a scale insect pest commonly causing outbreaks in Citrus and Croton.

Unaspis citri which has been hitherto reported on mango in Colombia was not found on mango. By judging from the host range of *Unaspis citri*, we believe that the record of *U. citri* on mango in Colombia is a misidentification.

No natural enemies such as parasitoid wasps were observed on the two most conspicuous species: *Aulacaspis tubercularis* and *Ischnaspis longirostris*. These latter two are thought to be exotic species, and a future introduction of natural enemies may be the key to their control.

Table 1. SCALE INSECTS THAT FEED ON MANGO IN COLOMBIA

Family Species	*COLOMBIA ICA, 1992	Present report
ORTHEZIIDAE <i>Orthezia</i> sp.	-	Newly recorded on mango
MARGARODIDAE <i>Icerya</i> sp.	Recorded	Recorded
PSEUDOCOCCIDAE <i>Ferrisia virgata</i>	-	Recorded
COCCIDAE <i>Ceroplastes cirripediformis</i> <i>C. floridensis</i> <i>Ceroplastes</i> sp. <i>Coccus acuminatus</i> <i>Coccus mangiferae</i> <i>Protopulvinaria longivalvata</i> <i>Pulvinaria psidii</i> <i>Saissetia coffeae</i> <i>Vinsonia stellifera</i>	Recorded Recorded Recorded Recorded Recorded Recorded Recorded Recorded Recorded	- - - Recorded Recorded - - - Recorded
DIASPIDIDAE <i>Andaspis hawaiiensis</i> <i>Aspidiotus destructor</i> <i>Aulacaspis tubercularis</i> <i>Chrysomphalus dictyospermi</i> <i>Diaspis</i> sp. <i>Hemiberlesia lataniae</i> <i>Hemiberlesia palmae</i> <i>Ischnaspis longirostris</i> <i>Mycetaspis personata</i> <i>Parlatoreopsis</i> sp. <i>Pseudaonidia trilobitiformis</i> <i>Pseudischnaspis acephala</i> <i>Pseudischnaspis boweryi</i> <i>Selenaspidus articulatus</i> <i>Unaspis citri</i>	- Recorded Recorded Recorded Recorded Recorded Recorded Recorded - - Recorded Recorded Recorded Recorded Recorded	Newly recorded on mango New record for Colombia - Recorded Recorded - Recorded - Recorded New record for Colombia Newly recorded on mango New record for Colombia Recorded - - - -

*Lista de insectos dañinos de Colombia, ICA 1992

Translation by Takumasa Kondo, May 20, 2002.

Additional notes (not in Abstract)

The *Icerya* sp. in the abstract has now been identified as *Crypticerya multicatrices* Kondo & Unruh.

Orthezia sp. has been identified as *Praelongorthezia praelonga* (Douglas).

The valid name for *Coccus acuminatus* is *Kilifia acuminata* (Signoret).

The valid name for *Coccus mangiferae* is *Milviscutulus mangiferae* (Green).