

DISTRIBUTION AND KNOWN HOST
RECORDS FOR *PLANCHONIA STENTAE*
(HEMIPTERA: COCCOIDEA: ASTEROLECANIIDAE)

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With the current emphasis on international travel, free trade agreements, and extensive importation of products such as lumber, ornamental plants, fruits, and vegetables, invasions by exotic species such as scale insects into new areas of the world can significantly impact the local flora. The South African pit scale, *Planchonia stentae* (Brain), has recently become a major pest in Florida on both introduced and native plant species (A. Hamon, personal communication). This species has now spread from its native range in South Africa into North and South America (Table 1).

Planchonia stentae was initially described from specimens on *Caralluma caudata* N.E.Br., *Huernia transvaalensis* Stent, and *Stapelia* sp. in South Africa by Brain (1920) and assigned to the genus *Asterolecanium*. Later, Russell (1941) illustrated the adult female from specimens on *Asclepias fruticosa* L., *C. caudata*, *Caralluma* sp., *Huernia bicampanulata* Verdoorn, *H. transvaalensis*, *Huernia* sp., and *Stapelia* sp. from South Africa and Kenya (Table 1). Borchsenius (1960) then placed the species into the genus *Planchonia* based on the presence of marginal 8- shaped pore bands, quinquelocular pore bands, and a marginal row of simple disk pores on both the dorsum and venter.

Gill (1993) reported this species (as *Asterolecanium stentae*) from California and cited plants in the families Euphorbiaceae and Asclepiadaceae as hosts. We also obtained specimens on *Euphorbia* sp. and *Lantana* sp. from California. In a study of material from the Florida State Collection of Arthropods, we identified *P. stentae* on a variety of host plants in Florida (Table 1). Also, we discovered specimens of this species on *Pueraria phaseoloides* (Roxb.) from Colombia. This exotic tropical vine was imported into South America to reduce soil erosion. In addition, we identified *P. stentae* on *Chamaesyce hirta* (L.) Millsp. from material collected in Puerto Rico. Damage to the host plant is in the form of open galls (pits) on the host plants (Gill 1993), which is typical for species in the family Asterolecaniidae. This pest species has a potential to cause serious problems on tropical and subtropical ornamental plants grown in the U.S.

SUMMARY

The South African pit scale, *Planchonia stentae* (Brain 1920) is reported from 49 ornamental plant species in Colombia and the United States for the first time. Based on its wide host range, this species is a potential threat to several ornamental plants within subtropical regions.

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TABLE 1. HOST PLANTS AND GEOGRAPHICAL DISTRIBUTION OF *PLANCHONIA STENTAE*.

Family	Host plant ¹
Acanthaceae	<i>Megaskepasma erythrochlamys</i> Lindau ² , <i>Ruellia</i> sp. ²
Aquifoliaceae	<i>Ilex cassine</i> L. ²
Asclepiadaceae	<i>Asclepias</i> sp. ² , <i>Calotropis gigantea</i> (L.) W. T. Aiton ² , <i>Hoya</i> sp. ² , <i>Stephanotis floribunda</i> Brongn. ² , no species information ³ , <i>Stapelia</i> sp. ^{4,5} , <i>Asclepias fruticosa</i> L. ⁵ , <i>Caralluma caudata</i> N. E. Br. ⁵ , <i>Caralluma</i> sp. ⁵ , <i>Hoodia</i> sp. ⁵ , <i>Huernia bicampanulata</i> Verdoorn ⁵ , <i>H. transvaalensis</i> Stent ⁵ , <i>Huernia</i> sp. ⁵
Asteraceae	<i>Bidens pilosa</i> L. ² , <i>Chrysanthemum frutescens</i> L. ² , <i>Solidago</i> sp. ² , <i>Steirodiscus chrysanthemoides</i> ⁵
Convolvulaceae	<i>Evolvulus glomeratus</i> Nees & Mart. ² , <i>Ipomoea carnea</i> Jacq. ² , <i>I. carnea</i> subsp. <i>fistulosa</i> (Mart. ex Choisy) D. F. Austin ²
Crassulaceae	<i>Echeveria</i> sp. ² , <i>Kalanchoe beharensis</i> Drake ² , <i>Kalanchoe</i> sp. ²
Cucurbitaceae	<i>Cucurbita moschata</i> (Duchesne ex Lam.) Duchesne ex Poir. ²
Euphorbiaceae	<i>Chamaesyce hirta</i> (L.) Millsp. ^{2,6} , <i>C. hyssopifolia</i> (L.) Small ² , <i>C. maculata</i> (L.) Small ² , <i>C. ophthalmica</i> (Pers.) D. G. Burch ² , <i>Euphorbia lactea</i> Haw. ² , <i>E. trigona</i> Haw. ² , <i>Euphorbia</i> sp. ^{2,3} , no species information ³
Fabaceae	<i>Cajanus cajan</i> (L.) Millsp. ² , <i>Chamaecrista fasciculata</i> (Michx.) Greene ² , <i>Crotalaria</i> sp. ² , <i>Desmodium tortuosum</i> (Sw.) D. C. ² , <i>Indigofera hirsuta</i> L. ² , <i>Pediomelum canescens</i> (Michx.) Rydb. ² , <i>Pueraria phaseoloides</i> (Roxb.) ⁷
Gesneriaceae	<i>Gloxinia sylvatica</i> (Kunth) Wieler ²
Lamiaceae	<i>Coleus blumei</i> Benth. ² , <i>Dicerandra frutescens</i> Shinnery ² , <i>Monarda punctata</i> L. ² , <i>Piloblephis rigida</i> (W.Bartram ex Benth.) Raf. ²
Oleaceae	<i>Fraxinus caroliniana</i> Mill. ²
Portulacaceae	<i>Portulaca</i> sp. ²
Solanaceae	<i>Solanum seafortianum</i> Andrews ²
Verbenaceae	<i>Nashia inaguensis</i> Millsp. ² , <i>Lantana</i> sp. ³

¹Names verified with Wunderlin (1998), the W³ Tropicos Search Base of the Missouri Botanical Garden (<http://www.mobot.org>), and the Gray Card Index Query of Harvard University (<http://www.herbaria.harvard.edu>).

²Florida, ³California, ⁴Kenya, ⁵South Africa, ⁶Puerto Rico, ⁷Colombia.

REFERENCES CITED

- BORCHSENIUS, N. S. 1960. Fauna of USSR, Homoptera, Kermococcidae, Asterolecaniidae, Lecanodiaspididae, Aclerididae. Akad. Nauk. SSR. Zool. Inst. 8: 282 pp. (In Russian, English Transl.).
- BRAIN, C. K. 1920. The Coccidae of South Africa-IV. Bull. Entomol. Res. 10: 95-128.
- GILL, R. J. 1993. Family Asterolecaniidae. In The scale insects of California. Part 2. The minor families. California. Dept. Food. Agric. Tech. Ser. Agric. Biosyst. Pl. Pathol. 2: 96-114.
- RUSSELL, L. M. 1941. A classification of the scale insect genus *Asterolecanium*. U.S. Dept. Agric. Misc. Publ. 424: 322 pp.
- WUNDERLIN, R. P. 1998. Guide to the vascular plants of Florida. Florida. Univ. Press. Gainesville. 806 pp.