

RED WAX SCALE (CEROPLASTES RUBENS MASKELL)^{1/}

COCCIDAE - HOMOPTERA

G. W. DEKLE

INTRODUCTION: RED WAX SCALE, CEROPLASTES RUBENS MASKELL (FIG. 1) WAS FIRST FOUND IN AN ORANGE COUNTY NURSERY ON THE FOLIAGE AND STEM OF GREENHOUSE-GROWN AGLAONEMA PICTUM VAR. TRICOLOR AND A. OBLONGIFOLIUM 'CURTISII' BY THE LATE A. C. CREWS, PLANT SPECIALIST, IN NOVEMBER 1955. THIS COLLECTION WAS A NEW FLORIDA AND CONTINENTAL UNITED STATES RECORD OF AN INTRODUCED PLANT PEST. PLANTS FOUND INFESTED WITH RED WAX SCALE IN FLORIDA NURSERIES ARE QUARANTINED UNTIL THE INFESTATION IS ELIMINATED.



FIG. 1. RED WAX SCALE CEROPLASTES RUBENS MASKELL. ADULT FEMALE (♀) AND NYMPHS ON LEAF (3X).



FIG. 2. FEMALE RED WAX SCALE GREATLY ENLARGED (27X). NOTE CONSPICUOUS WHITE BANDS OF POWDERY WAX.

DESCRIPTION: THE WAXY COVER OF THE ADULT FEMALE IS PINKISH TO RED, CONVEX, LONGER THAN WIDE AND WITH TWO CONSPICUOUS PAIRS OF WHITE BANDS THAT EXTEND DORSALLY FROM THE SPIRACULAR AREA (FIG. 2). SIZE: 3.5 - 4.5MM. THE NYMPHS ARE PINKISH IN COLOR.

ECONOMIC IMPORTANCE: THIS SCALE HAS BEEN REPORTED TO BE AN ECONOMIC PEST ON CITRUS.

DISTRIBUTION: ANTIGUA, AUSTRALIA, BERMUDA, CAROLINE IS., CEYLON, CHINA, COOK IS., CUBA, DOMINICAN REPUBLIC, FIJI, FRANCE, GUAM, HAWAII, HONDURAS, INDIA, INDONESIA, ITALY, JAPAN, KENYA, LOYALTY IS., MALAYA, MARIANA IS., MEXICO, NEW CALEDONIA, NEW HEBRIDES, NEW ZEALAND, PHILIPPINES, SAMOA, SEYCHELLES, SOLOMON IS., TAHITI, TAIWAN, UNION OF SOUTH AFRICA, AND ZANZIBAR (FIG. 3).

CONTROL: DIMETHOATE (CYGON) HAS BEEN USED IN SPRAYS, DRENCHES, AND DIPS. CYGON GIVES GOOD CONTROL BUT IS NOT AN ERADICANT. INFESTED PLANTS SHOULD BE DESTROYED.

REMARKS: APPARENTLY ERADICATED FROM FLORIDA. INFESTATIONS WERE ESTABLISHED IN DADE, DUVAL, ORANGE, PALM BEACH, AND PINELLAS COUNTIES (FIG. 4). INTRODUCED FOLIAGE PLANTS APPARENTLY WERE RESPONSIBLE FOR THE ESTABLISHMENT OF THIS INSECT IN FLORIDA. THERE WERE 92 INTERCEPTIONS OF RED WAX SCALE REPORTED BY THE USDA PLANT QUARANTINE DIVISION, HYATTSVILLE, MARYLAND, BETWEEN 1964 - 1968. THIS INSECT, UNDER NATURAL CONDITIONS, COULD BECOME ESTABLISHED IN SOUTH FLORIDA.

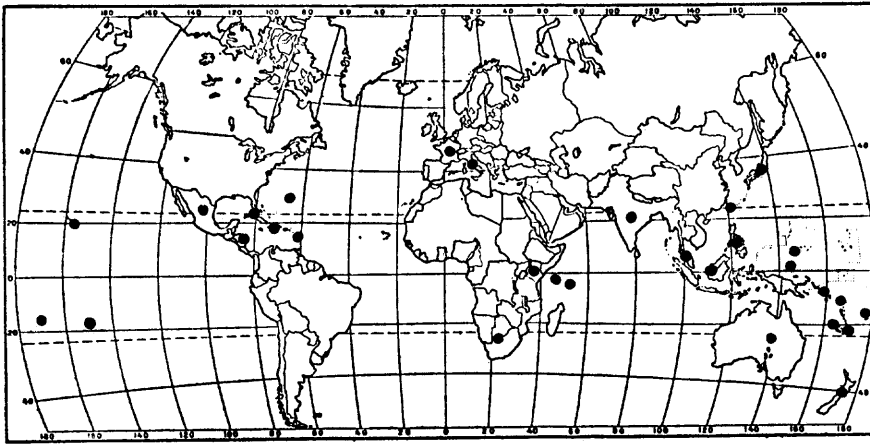


FIG. 3 WORLD DISTRIBUTION OF RED WAX SCALE (*CEROPLASTES RUBENS* MASKELL).

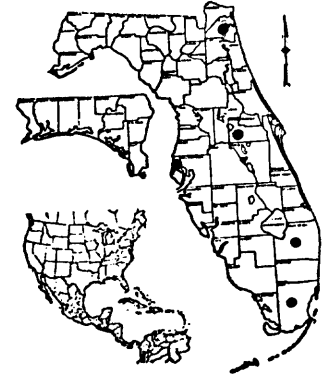


FIG. 4. FLORIDA COUNTIES WHERE RED WAX SCALE WAS ESTABLISHED AND HAS BEEN ERADICATED.

HOSTS: *ACANTHACEAE*, *ACER* SP. (MAPLE), *ACROSTICHUM* SP. (FERN), *AGLAONEMA COMMUTATUM* SCHOTT, *A. MODESTUM* SCHOTT, *A. NITIDUM* (JACK) KUNTH ('CURTISII', *A. PICTUM* 'TRICOLOR', *A. COMMUTATUM* SCHOTT 'PSEUDOBRACTEATUM', *A. ROEBELINII* (LIND.) GENTIL., *A. TREUBII* ENGL., *ALLAMANDA CATHARTICA* L. 'SCHOTTII', *ALPINIA PURPURATA* K. SCHUM., *ALYXIA OLIVAEFORMIS* GAUDICH., *ANTHURUM* SP., *ANTIDESMA* SP. (CHINA LAUREL), *ARTEMISIA VULGARIS* L. (MUGWORT), *ARDISIA JAPONICA* BLUME, *ASPLENIUM NIDUS* L. (BIRD NEST FERN), *AUCUBA* SP. (GOLDDUST PLANT), *BERBERIS* SP. (BARBERRY), *BRASSICA ACTINOPHYLLA* ENDL. (SCHEFFLERA), *BUXUS* SP. (BOXWOOD), *B. MICROPHYLLA* SIEB., *CALOPHYLLUM TOMENTOSUM* WIGHT. (BEAUTYLEAF), *CAMELLIA JAPONICA* L., *C. JAPONICA* L., SSP. *RUSTICANA* (HONDA) KITAMURA, *C. SINENSIS* (L.) KUNTZE (TEA), *CAPSICUM ANNUM* L. (PEPPER), *CELOSIA ARGENTEA* L., VAR. *CRISTATA* (L.) KUNTZE, *CHAENOMELES JAPONICA* (THUNB.) LINDL. (FLOWERING QUINCE), *CHRYSANTHEMUM SINENSE* SABINE, *CIBOTIUM* SP. (FERN TREE), *CINNAMOMUM PEDUNCULATUM* PRESL. (CINNAMON), *CITRUS RETICULATA* BLANCO (MANDARIN ORANGE), *C. SINENSIS* (L.) OSBECK (SWEET ORANGE), *CLEYERA JAPONICA* THUNB., *COCOS NUCIFERA* L. (COCONUT), *COFFEA* SP. (COFFEE), *COTONEASTER* SP. (ORNAMENTAL), *CRASSULA ROSULARIS* HAW. (SUCCULENT), *CRATAEGUS* SP. (HAW, HAWTHORN, MAYHAW), *CYCAS REVOLUTA* THUNB. (SAGO PALM), *CYDONIA OBLONGA* MILL. (QUINCE), *CYTISUS SCOPARIUS* LINK (SCOTCH BROOM), *DAPHNE ODORA* THUNB., *DIEFFENBACHIA* SP. (ORNAMENTAL), *DIOCLEA VIOLACEA* MART. EX BENTH., *DIOSPYROS KAKI* L.F. (JAPANESE PERSIMMON), *DIZYGOTHECA ELEGANTISSIMA* VIG. & GUILL. (FALSE ARALIA), *DURANTA REPENS* L. (SKYFLOWER), *ELAECARPUS BIFIDUS* HOOK. & ARN., *ELAPHOGLOSSUM RETICULATUM* GAUD. (FERN), *EPIDENDRUM* SP. (ORCHID), *ERIOBOTRYA JAPONICA* LINDL. (LOQUAT), *EUCALYPTUS GLOBULUS* LABILL. (TASMANIAN BLUEGUM), *EUGENIA SMITHII* POIR., *EUONYMUS EUROPAENS* L. (SHRUB), *E. JAPONICUS* THUNB. (JAPANESE EVERGREEN), *E. ALATA* MAXIM., *EURYA EMARGINATA* (THUNB.) MAKINO, *FATSIA JAPONICA* DECNE. & PLANCH. (ARALIA), *FICUS CARICA* L. (FIG), *F. FAVEOLATA* WALL., *GARCINIA SPICATA* HOOK.F., *GARDENIA JASMINOIDES* ELLIS (GARDENIA, CAPE JASMINE), *GRAMMATOPHYLLUM* SP. (ORCHID), *HEDERA HELIX* L. (ENGLISH IVY), *ILEX SERRATA* THUNB. (HOLLY), *ILLICIAM ANISATUM* L. (ANISE TREE), *IRECINE* SP. (BLOODLEAF), *IXORA* SP. (EVERGREEN SHRUB), *KADSURA JAPONICA* (THUNB.) DUNAL. (KATSURA TREE), *LAURUS NOBILIS* L. (LAUREL), *LIGUSTRUM JAPONICUM* THUNB. (PRIVET), *LINDERA CITRIDORA* HEMSL. (SPICE BUSH), *LITCHI CHINENSIS* SONN. (LYCHEE, LEECHEE), *LITSEA GLAUCA* SIEB., *LYCIUM CHINENSE* MILL. (CHINESE MATRIMONY VINE), *MACHILUS THUNBERGII* SIEB., *MAGNOLIA SALICIFOLIA* (BAY), *M. OBOVATA* THUNB. (BAY), *MALUS* SP. (APPLE), *MANGIFERA INDICA* L. (MANGO), *MEDINILLA* SP., *MELIA AZEDARACH* L. (CHINABERRY, CHINA TREE), *METROSIDEROS VILLOSA* SM., *MONSTERA DELICIOSA* LIEBM., *MORUS ALBA* L. (WHITE MULBERRY), *MYRSINE* SP., *NANDINA DOMESTICA* THUNB., *NERIUM OLEANDER* L. (OLEANDER), *PALTONIUM LANCEOLATUM* PRESL. (RIBBON FERN), *PEPEROMIA* SP. (PEPEROMIA), *PERSEA AMERICANA* MILL. (AVOCADO), *PHILODENDRON GIGANTEUM* SCHOTT, *PHOTINA GLABRA* MAXIM., *PILEA* L., *PINUS DENSIFLORA* SIEB. & ZUCC., *P. PAVIFLORA* SIEB. & ZUCC. (JAPANESE WHITE PINE), *PITTOSPORUM TOBIRA* (THUNB.) AIT. (PITTOSPORUM), *PODOCARPUS NAGI* (THUNB.) MAKINO (PODOCARPUS), *POLYPODIUM* SP. (FERN), *PONCIRUS TRIFOLIATA* (L.) RAF. (TRIFOLIATE ORANGE), *PRUNUS DOMESTICA* L. (PEACH OR PRUNE), *P. MUME* SIEB. & ZUCC., *PSYCHOTRIA* SP. (WILD COFFEE), *PTERIS* SP. (BRAKE FERN), *PYRUS PYRIFOLIA* (BURM.F.) NAKAI (SAND PEAR), *RHODODENDRON INDICUM* SWEET (AZALEA), *RHUS SUCCEDANEA* L. (WAX-TREE), *ROSA* SP. (ROSE), *SCHIMA* SP., *SPARTIUM JUNCEUM* L. (SPANISH BROOM), *SPIREA THUNBERGII* SIEB. (SPIREA, BRIDALWREATH), *STANHOPEA* SP., *STRAUSSIA* SP., *STROBILANTHES JAPONICUS* MIQ. (LAVENDER-BELL), *SYMPLOCOS JAPONICA* DC., *TODEA BARBARA* (L.) MOORE, *TAMARIX CHINENSIS* LOUR. (SALT CEDAR, TAMARIX), *WISTERIA* SP. (WISTERIA), *ZANTEDESCHIA* SP. (CALLA).

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