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FIRST REPORT OF *AULACASPIS YASUMATSUI* (HEMIPTERA: DIASPIDIDAE) IN AFRICA (IVORY COAST), AND UPDATE ON DISTRIBUTION

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Cycas species and their relatives have been a staple in the Florida landscapes for 50 years. In the last 25 to 30 years the popularity of these plants in the landscape has increased worldwide. In 1996, a devastating pest to cycads was introduced into Florida, the cycad Aulacaspis scale (*Aulacaspis yasumatsui* Takagi). This insect has since plagued both homeowner and grower alike in Florida and has been a significant pest in many other areas of the world.

The origin of the Cycad Aulacaspis scale (CAS) is from Southeast Asia where it was described in Thailand by Takagi (1977) from specimens collected in Bangkok on *Cycas* sp. in 1972. It is currently considered established in the following Countries in Asia: in Hong-Kong, southern portion of China (Howard & Wessling 1999), in Singapore in 2000 (Hodgson & Martin 2001), and also from Taiwan in 2000 (Shih 2003).

Following its introduction in Florida in 1996 (Howard et al. 1999), *A. yasumatsui* spread in the Caribbean established in American Virgin Islands, Cayman islands (Howard & Weissling 1999), Puerto Rico (Halbert 2000), Barbados 2003 (Ministry of Agriculture & Rural Development, Barbados website). In Oceania its presence is proven in Hawaii (Heu & Chun 2000) and CAS is regularly intercepted on cycads from Hawaii in California (G. Watson, personal communication). Although many of the southern states have intercepted CAS on infested *Cycas revoluta* Thunb., it has only been verified as being established in the landscape in Louisiana (Pollet, Louisiana State University, personal communication) and Texas (samples verified by Hodges, FDACS-DPI, 2005).

It is present in Micronesia on the island of Guam where it is causing major devastation to the natural forests (Moore et al. 2005) and it was intercepted in 2004, in New Zealand, on imported cycads of Costa-Rica. CAS was detected and all plants associated with it were destroyed (Paice et al. 2005) The authors emphasize that *Aulacaspis yasumatsui* is not established in NZ, on the other hand the origin of the cycads confirms the presence of CAS in Costa Rica.

In Europe, CAS is regularly intercepted by many of the Plant Protection Services from various European Countries. The first recorded interception dates to 1995 on cycads imported in the Netherlands and coming from Vietnam (Jansen, 1996). The Netherlands Plant Protection Service recorded CAS 5 times in 2004 and 4 times in 2005. The records are as follows: imported from Taiwan (1×), Vietnam (1×) and Costa Rica (2×) and the rest in greenhouses (5×). During the time period between 1995 and 2004 CAS was not detected (Jansen, personal communication).

In France, it was intercepted several times in 2001 at the checkpoints of Marseille and in nursery gardens of the French Riviera, on imported cycads of Vietnam (Germain 2001a). The same year we identified CAS in the department of Ain, close to the Switzerland border, on a cycad coming from Germany (Germain 2001b). The species does not seem to have been established in France even though we found it on container and nursery grown cycads in Nice during Nov 2004. In the UK, CAS was detected at a commercial plant nursery in England on Cycads imported from Vietnam via the Netherlands on Apr 2006. This is the first interception of this species in the UK. Action is being taken to eradicate the pest (C. Malumphy personal communication). In Italy this species has not been intercepted (G. Pellizzari, personal communication).

In the French department of the Antilles the Service de la Protection des Végétaux of Martinique indicated that armored scales near *A. yasumatsui* were taken on cycads at Fort-de-France on Nov 3, 2005. Cycad Aulacaspis scale is regarded as established in Martinique. Its presence on imported cycads of Costa Rica in various countries makes it possible to affirm its spreading in Central America.

In Jan 2006, *A. yasumatsui* Takagi (Hemiptera: Diaspididae) was identified in France from cut foliage of cycads imported from the Ivory Coast in Africa. This interception enables us to consider Cycad Aulacaspis Scale (CAS) as being present in the Ivory Coast, and would be considered as the first record of CAS in Africa. This record, originating from an interception in France provides information on European interceptions and subsequently the current distribution of CAS in the world.

The continued spread of CAS is inevitable so long as the trade in cycad plants continues. Cycad Aulacaspis Scale can not only be a devastating pest of ornamental or container grown cycads, but it can also significantly impact the local flora. Native cycads in Guam (*Cycas micronesia (Hill))* and Taiwan (*Cycas taitungensis* CF Shen et al.) have been adversely affected by CAS infestations (Haynes 2005).

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SUMMARY

Specimens of *Aulacaspis yasumatsui* Takagi (Hemiptera: Diaspididae) were collected in France on cycads imported from Ivory Coast. This constitutes the first record of this species in Africa. Information on European interceptions and an update world distribution are given.

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