



Pest Risk Analysis for *Cerataphis lataniae* Boisduval

STAGE 1: PRA INITIATION

1. What is the name of the pest?

Cerataphis lataniae (Boisduval) Hemiptera Aphididae the Latania aphid

Synonyms:

Ceratovacuna palmae (Baehr)

Aphis palmae (Baehr)

Boisduvalia lataniae (Boisduval)

Note: In the past *C. lataniae* has been confused with both *C. brasiliensis* and *C. orchidearum* (Howard, 2001). As a result it is not always clear which of the older records for host plants and distribution refer to which species.

BAYER CODES: CEATLA

2. What is the reason for the PRA?

This PRA was initiated following a second interception of this species. *Cerataphis lataniae* was first intercepted in the UK in 1999 on a consignment of *Archontophoenix alexandra* and *Brahea drandegai*, from South Africa. Since then it has been intercepted twice more; on 30/05/02 on *Cocos* spp. and then again on 13/06/02 on *Cocos nucifera*. Both the findings in 2002 were at the same botanic garden and there is some suggestion the *Coco* plants were supplied by the nursery where the first interception was made in 1999.

3. What is the PRA area?

As *C. lataniae* is present within the EU (Germany, Italy, Spain) (See point 11.) this PRA only considers the UK.

STAGE 2: PEST RISK ASSESSMENT

4. Does the pest occur in the PRA area or does it arrive regularly as a natural migrant?

No. Although *Cerataphis lataniae* is included on the British checklist this is likely to be an invalid record as there is no evidence to suggest it is established in the UK (R. Hammon, CSL, *pers. comm.*).

5. Is there any other reason to suspect that the pest is already established in the UK, EPPO or EU region?

Yes. This species is established in Italy (Anonymous, 2000), Spain (Tenerief) (Perez Hidalgo *et al.*, 2000) and has been reported as successfully overwintering in glasshouses in Germany (Bogs and Brasch, 1986). A single individual was caught in a suction trap in Rennes, France, in 1990 but there is no further evidence to suggest it is established there (R. Hammon, CSL, *pers. comm.*).



6. What is the pest's EU Plant Health Directive status?

Not listed.

7. What is the pest's EPPO Status?

Not listed. Although *C. lataniae* is a regulated pest in New Zealand (Website 1).

8. What are its host plants?

Hosts are listed in Table 1.

Table 1: *Cerataphis lataniae* host list

Host Family	Host Genus and species	Reference
Araceae	<i>Pothos repens</i>	Qiao & Zhang, 2001
Arecaceae	<i>Acoelorrhaphe wrightii</i>	Perez Hidalgo <i>et al.</i> , 2000
	<i>Areca</i> spp.	Website 2
	<i>Areca catechu</i>	More <i>et al.</i> , 2002 and 2003
	<i>Calamus</i> spp.	Perez Hidalgo <i>et al.</i> , 2000
	<i>Cocos nucifera</i>	Blackman & Eastop, 1994; CABI, 2005; Melo <i>et al.</i> , 1977; Perez Hidalgo <i>et al.</i> , 2000; Sánchez-Soto & Nakano, 2002 and Qiao & Zhang, 2001
	<i>Daemonorops verticillaris</i>	Steiner, 2001
	<i>Korthalsia robusta</i>	Steiner, 2001
	<i>Korthalsia rostrata</i>	Steiner, 2001
	<i>Korthalsia scortechini</i>	Steiner, 2001
	<i>Latania</i> spp.	Blackman and Eastop, 1994 and Qiao & Zhang, 2001
	<i>Latania borbonica</i>	Perez Hidalgo <i>et al.</i> , 2000
	<i>Latania rubra</i>	Perez Hidalgo <i>et al.</i> , 2000
	<i>Pritchardia</i> spp.	Perez Hidalgo <i>et al.</i> , 2000
	<i>Raphia</i> spp.	Perez Hidalgo <i>et al.</i> , 2000
<i>Raphia vinifera</i>	Perez Hidalgo <i>et al.</i> , 2000	
Gramineae	<i>Poa</i> spp.	Qiao & Zhang, 2001
Musaceae	<i>Musa</i> spp.	Melo <i>et al.</i> , 1977
	<i>Strelitzia alba</i>	Perez Hidalgo <i>et al.</i> , 2000

C. lataniae has also been reported on various orchid species (Perez Hidalgo *et al.* 2000 and Website 6). However reports of findings on orchids are questionable due to the taxonomic confusion discussed earlier. For example, Perez Hidalgo *et al.* (2000) believe that the findings on orchids reported in their paper may actually refer to *C. orchidearum*, a species for which orchids are a known host (Howard *et al.*, 2001; Website 7).

9. What hosts are of economic and/or environmental importance in the PRA area?

There is a large commercial market in the UK for Palm type tree species and subsequently there are a large number of nurseries here either selling or specialising in these plants. As an example of the value of this trade, prices in the catalogue for one UK based specialist nursery range from £9.99 up to £595 (website 8).



From an EU perspective, a potentially more important host is *Musa* spp. The value of the EU grown banana market is hard to determine, for example FAO statistics for the value of bananas in the EU do not separate out home production from imports. However, from the figures given in Table 2 for the area of bananas harvested and the overall production of this crop within the EU it is reasonable to assume the value of this commodity is significant.

Country	Production (MT)*	Area Harvested (Ha)*
Spain	421,931	9,000
Portugal	30,000	1,200
Greece	3,700	200
Italy	400	15
sum	465,031	10,415

* FAO, 2004

10. If the pest needs a vector, is it present in the PRA area?

No vector is required. This is a free living organism.

11. What is the pest's present geographical distribution?

North America:	Bermuda, Hawaii and Southern Florida (rarely found north of lake Okeechobee).	CABI, 2005; Howard <i>et al.</i> , 2001; Perez Hidalgo <i>et al.</i> , 2000 and Website 4
Central America & Caribbean:	Cuba, Dominican Republic, Jamaica, Montserrat, Puerto Rico, St. Lucia and Trinidad and Tobago	CABI, 2005 and Perez Hidalgo <i>et al.</i> , 2000
South America:	Brazil, Columbia, French Guiana, Guyana and Venezuela	CABI, 2005; Melo <i>et al.</i> , 1977; Perez Hidalgo <i>et al.</i> , 2000 and Sánchez-Soto & Nakano Anon., 2000; Bogs and Brasch, 1986; Perez Hidalgo <i>et al.</i> , 2000
Europe:	Germany ¹ , Italy and Spain (Tenerife)	Perez Hidalgo <i>et al.</i> , 2000
Africa:	Burundi	More <i>et al.</i> , 2002 & 2003; Perez Hidalgo <i>et al.</i> , 2000 and Qiao & Zhang, 2001
Asia:	China, India, Indonesia, Java, Malaysia, Taiwan	Perez Hidalgo <i>et al.</i> , 2000 and Qiao & Zhang, 2001
Oceania:	Australia (South East and New South Wales) and Guam	Perez Hidalgo <i>et al.</i> , 2000; Website 3 and Website 5

¹ Under protective cultivation only

12. Could the pest enter the PRA area?

Yes. *Cerataphis lataniae* has been intercepted on imported plants three times in the past six years. Howard *et al.* (2001) state that it is likely this species is spread via trade in infested living palm trees.

13. Could the pest establish outdoors in the PRA area?

Unlikely. The current distribution of this species suggests it favours warmer climates so is unlikely to be able to establish outdoors in the UK.



14. Could the pest establish in protected environments in the PRA area?

Yes. Hosts plants are found under glass in the PRA area; Blackman & Eastop (1994) state that *C. lataniae* is common on palms in glasshouses and Bogs and Brasch (1986) report it successfully overwintering in glasshouses in Germany.

15. How quickly could the pest spread within the PRA area?

Unclear. This is difficult to predict as there is little documented evidence on the dispersal of this species. Routes of spread are likely to include movement by alatae adults, dispersal by wind and trade, exchange and sale of infested material.

16. What is the pest's potential to cause economic and/or environmental damage?

There is little documented evidence of what, if any, economic or environmental damage is caused by *C. lataniae*. Damage by many aphid species tends to be aesthetic as result of the honeydew they produce, however secondary infection of plants by sooty moulds, which can develop on honeydew, does occur.

Soto and Nakano (2002) report that *Cocos nucifera* trees infested with *C. lataniae* are much more susceptible to damaging attack by the lepidopteran pest *Batrachedra nuciferae* than non-infested trees.

17. What is the pest's potential as a vector of plant pathogens?

There are no records of *C. lataniae* acting as a vector for any plant pathogen. However as many aphid species are important vectors of viruses it would be safe to assume that *C. lataniae* has the potential to act as a vector.

STAGE 3: PEST RISK MANAGEMENT

18. What are the prospects for continued exclusion?

This aphid is infrequently intercepted in the UK despite the large volume of palms imported every year, therefore the prospects for continued exclusion appear to be good.

19. What are the prospects of eradication?

As with all findings of non-indigenous pests, the success of eradication will depend on how widely the pest is distributed when it is first found.

20. What management options are available for containment and control?

Destruction of infested material. Infested material can also be treated with an aphicide containing the active ingredient pymetrozine. Biocontrol may also be possible using *Lecanicillium mucarium* (an entomopathogenic fungus) or with predators such as *Aphidoletes aphidimyza* and *Chrysoperla carnea*.

CONCLUSION OF THE PEST RISK ANALYSIS

Cerataphis lataniae is already present in parts of the EU where it has become established both outdoors in southern Member States and under protected cultivation (Germany). Although there is little information available of the thermal biology of this pest its current geographic distribution, mainly in counties with warmer climates than the UK, suggests that it is unlikely to establish outdoors here. *Cerataphis lataniae* has a relatively small host range and most of the hosts present in the UK are likely to be imported ornamentals. More work is needed to determine the level of damage that can be caused by this pest.

UNCERTAINTIES AND FURTHER WORK

Section of PRA	Uncertainties	Further work that would reduce uncertainty
Taxonomy	There is still confusion in the literature between <i>C. lataniae</i> , <i>C. brasiliensis</i> and <i>C. orchidearum</i>	Write to authors of papers were CSL think this confusion occurs and ask for clarification of the species discussed.
Pathway	Volume of host material imported into the UK	
Distribution	Distribution within other EU / EPPO states is uncertain.	Contact other EU / EPPO states to ask for information about presence of the pest.
Hosts	Extent of hosts grown or imported in UK	
Establishment	Suitability of climate in the UK/ EU for establishment.	Experimental data to determine the thermal biology of the pest.
Spread	Rate of spread if moved in trade.	
Impact	There are no specific data available describing host damage.	Continued literature searches for reposts of damage
Management		

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- Website 1: www.biosecurity.govt.nz/pests-diseases/registers-lists/unwanted-organisms/index.htm
- Website 2: <http://www.crees.org/plantprotection/AubWeb/bugweb/bugroot.htm>
- Website 3 http://www.ento.csiro.au/aicn/name_s/b_749.htm
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