

Appendix A: Summary of Interception Records for Pests Found With SWPM

Tables A–1 through A–5 summarize information posted as of June 10–16, 1999, in the Port Information Network (PIN–309) pest interception data base for cargo arriving in the United States from 1996 through 1998. Iterative queries were necessary to compile a subset of records representing interceptions associated with SWPM. APHIS inspectors typically recorded the “host” or commodity for the shipment wherein a live pest was found. Often, the information in this field does not indicate the presence of wood but rather items such as barbells, tiles, machinery, and other generally heavy objects that need SWPM for support during shipment and that would not serve as hosts themselves for pest organisms. To obtain such records, computer queries were run for all families of insect wood pests listed in Solomon (1995) and other groups known to infest wood. These queries were then combined into one data base file. Records were scrutinized, and those records that clearly indicated a wood product (e.g., furniture, artware, woodenware), logs, or lumber other than SWPM were eliminated. In some cases, the “host” descriptor (e.g., wood, *Pinus* sp.) was too general to differentiate SWPM from wood commodities; these records were left in to be conservative, but some records might actually have been for logs or lumber rather than SWPM. Records of pest interceptions for “hitchhiker” species that do not utilize wood as a host were also eliminated as being outside the defined scope of this analysis. This methodology is believed to have obtained the vast majority of records for interceptions of quarantine-significant organisms associated with SWPM; however, some records could have been missed.

A live organism must be found and identified to generate a record in the data base. The PIN–309 database does not include records for shipments in which dead organisms were found, bark remained attached, or damage signs (such as borer holes) were present unless a live pest was also found. Pest identification in the PIN–309 data base is recorded to the lowest possible taxonomic level; larvae often are identifiable only to family level, whereas adults frequently can be identified to genus or species. Only taxa that are considered to be actionable or reportable by APHIS identifiers (i.e., quarantine-significant) are included in the data base. Taxa that are not readily detectable and identifiable at ports of entry, such as microscopic pathogens, generally are not represented in the data base information; therefore, table A–1 is not a comprehensive listing of organisms that may be transported with SWPM.

Table A-1. Pest taxa intercepted with solid wood packing materials at U.S. ports of entry or warehouses during 1996–98 as recorded in the PIN-309 data base as of June 10–16, 1999. Total interceptions = 1,205.

Pest	Order: Family	Number of Interceptions 1996–98
<i>Agrius</i> sp.	Coleoptera: Buprestidae	3
<i>Agrotis segetum</i>	Lepidoptera: Noctuidae	1
<i>Anoplophora</i> sp.	Coleoptera: Cerambycidae	24
<i>Anoplophora glabripennis</i>	Coleoptera: Cerambycidae	3
<i>Anthaxia</i> sp.	Coleoptera: Buprestidae	4
<i>Apriona</i> sp.	Coleoptera: Cerambycidae	1
Arctiidae spp.	Lepidoptera: Arctiidae	3
<i>Asemum</i> sp.	Coleoptera: Cerambycidae	4
<i>Bactocera</i> sp.	Coleoptera: Cerambycidae	3
<i>Blapstinus</i> sp.	Coleoptera: Tenebrionidae	4
Bostrichidae spp.	Coleoptera: Bostrichidae	6
Buprestidae spp.	Coleoptera: Buprestidae	12
<i>Buprestis</i> sp.	Coleoptera: Buprestidae	3
<i>Buprestis haemorrhoidalis</i>	Coleoptera: Buprestidae	1
<i>Callidiellum</i> sp.	Coleoptera: Cerambycidae	1
<i>Callidiellum rufipenne</i>	Coleoptera: Cerambycidae	2
<i>Callidium</i> sp.	Coleoptera: Cerambycidae	3
<i>Carphoborus minimus</i>	Coleoptera: Scolytidae	2
Cerambycidae spp.	Coleoptera: Cerambycidae	22
Cerambycinae spp.	Coleoptera: Cerambycidae	23
<i>Ceresium</i> sp.	Coleoptera: Cerambycidae	102
<i>Chalcophora</i> sp.	Coleoptera: Buprestidae	1
<i>Chlorophorus</i> sp.	Coleoptera: Cerambycidae	2
<i>Chrysobothris</i> sp.	Coleoptera: Buprestidae	8
<i>Cladosporium</i> sp.	Fungi Imperficti: Hyphomycetes	1
<i>Coccotrypes</i> sp.	Coleoptera: Scolytidae	1
Coleoptera spp.	Coleoptera	4
<i>Conoderus</i> sp.	Coleoptera: Elateridae	1
<i>Coptotermes crassus</i>	Isoptera: Rhinotermitidae	1
Cossidae spp.	Lepidoptera: Cossidae	2
<i>Crematogaster</i> sp.	Hymenoptera: Formicidae	9
<i>Cryphalus</i> sp.	Coleoptera: Scolytidae	4
Cryptorhynchinae spp.	Coleoptera: Curculionidae	1
<i>Cryptorhynchus</i> sp.	Coleoptera: Curculionidae	1
<i>Cryptotermes</i> sp.	Isoptera: Kalotermitidae	1
<i>Crypturgus</i> sp.	Coleoptera: Scolytidae	10
<i>Crypturgus cinereus</i>	Coleoptera: Scolytidae	2
<i>Curculio</i> sp.	Coleoptera: Curculionidae	1
Curculionidae spp.	Coleoptera: Curculionidae	12
<i>Cryptogenius</i> sp.	Coleoptera: Scolytidae	2
<i>Dihammus</i> sp.	Coleoptera: Cerambycidae	2
<i>Dryocetes</i> sp.	Coleoptera: Scolytidae	25
<i>Dryocetes autographus</i>	Coleoptera: Scolytidae	3

Table A-1 Continued. Pest taxa intercepted with solid wood packing materials at U.S. ports of entry or warehouses during 1996–98 as recorded in the PIN-309 data base as of June 10–16, 1999. Total interceptions = 1,205.

Pest	Order: Family	Number of Interceptions 1996–98
<i>Dryocetes villosus</i>	Coleoptera: Scolytidae	1
<i>Elaphidion</i> sp.	Coleoptera: Cerambycidae	2
<i>Elateridae</i> spp.	Coleoptera: Elateridae	1
<i>Euryscelis suturalis</i>	Coleoptera: Cerambycidae	1
<i>Euwallacea validus</i>	Coleoptera: Scolytidae	1
<i>Geometridae</i> spp.	Lepidoptera: Geometridae	1
<i>Glenea</i> sp.	Coleoptera: Cerambycidae	1
<i>Hadeninae</i> spp.	Lepidoptera: Noctuidae	1
<i>Hesperophanes</i> sp.	Coleoptera: Cerambycidae	30
<i>Heterobostrychus aequalis</i>	Coleoptera: Bostrichidae	3
<i>Heterobostrychus brunneus</i>	Coleoptera: Bostrichidae	1
<i>Hylastes</i> sp.	Coleoptera: Scolytidae	4
<i>Hylastes ater</i>	Coleoptera: Scolytidae	7
<i>Hylastes attenuatus</i>	Coleoptera: Scolytidae	6
<i>Hylastes cunicularius</i>	Coleoptera: Scolytidae	1
<i>Hylastes linearis</i>	Coleoptera: Scolytidae	1
<i>Hylesinus varius</i>	Coleoptera: Scolytidae	2
<i>Hylobius</i> sp.	Coleoptera: Curculionidae	11
<i>Hylungops</i> sp.	Coleoptera: Scolytidae	4
<i>Hylungops palliatus</i>	Coleoptera: Scolytidae	28
<i>Hylungus</i> sp.	Coleoptera: Scolytidae	3
<i>Hylungus ligniperda</i>	Coleoptera: Scolytidae	23
<i>Hymenoptera</i> spp.	Hymenoptera	1
<i>Hypocryphalus</i> sp.	Coleoptera: Scolytidae	6
<i>Hypothenemus</i> sp.	Coleoptera: Scolytidae	26
<i>Ips</i> sp.	Coleoptera: Scolytidae	19
<i>Ips acuminatus</i>	Coleoptera: Scolytidae	2
<i>Ips cembrae</i>	Coleoptera: Scolytidae	2
<i>Ips mannsfeldi</i>	Coleoptera: Scolytidae	1
<i>Ips sexdentatus</i>	Coleoptera: Scolytidae	8
<i>Ips typographus</i>	Coleoptera: Scolytidae	37
<i>Kalotermidae</i> spp.	Isoptera: Kalotermitidae	1
<i>Lamia</i> sp.	Coleoptera: Cerambycidae	2
<i>Lamiinae</i> spp.	Coleoptera: Cerambycidae	18
<i>Larinus</i> sp.	Coleoptera: Curculionidae	1
<i>Lasiocampidae</i> spp.	Lepidoptera: Lasiocampidae	1
<i>Lepidoptera</i> spp.	Lepidoptera	3
<i>Leptostylus</i> sp.	Coleoptera: Cerambycidae	1
<i>Lymantriidae</i> spp.	Lepidoptera: Lymantriidae	1
<i>Melanophila</i> sp.	Coleoptera: Buprestidae	3
<i>Melanophila cuspidata</i>	Coleoptera: Buprestidae	2
<i>Molorchus</i> sp.	Coleoptera: Cerambycidae	2

Table A–1 Continued. Pest taxa intercepted with solid wood packing materials at U.S. ports of entry or warehouses during 1996–98 as recorded in the PIN–309 data base as of June 10–16, 1999. Total interceptions = 1,205.

Pest	Order: Family	Number of Interceptions 1996–98
<i>Monochamus</i> sp.	Coleoptera: Cerambycidae	117
<i>Monochamus alternatus</i>	Coleoptera: Cerambycidae	8
<i>Neuroterus</i> sp.	Hymenoptera: Cynipidae	1
<i>Niphades</i> sp.	Coleoptera: Curculionidae	3
Noctuidae spp.	Lepidoptera: Noctuidae	6
Nymphalidae spp.	Lepidoptera: Nymphalidae	1
<i>Orthotomicus</i> sp.	Coleoptera: Scolytidae	8
<i>Orthotomicus (Ips) erosus</i>	Coleoptera: Scolytidae	51
<i>Orthotomicus suturalis</i>	Coleoptera: Scolytidae	1
<i>Palaeocallidium</i> sp.	Coleoptera: Cerambycidae	1
<i>Phaenomerus</i> sp.	Coleoptera: Curculionidae	1
<i>Pheidole</i> sp.	Hymenoptera: Formicidae	1
<i>Phloeosinus</i> sp.	Coleoptera: Scolytidae	3
<i>Phloeotribus scarabaeoides</i>	Coleoptera: Scolytidae	1
Phycitinae spp.	Lepidoptera: Pyralidae	2
<i>Phymatodes</i> sp.	Coleoptera: Cerambycidae	15
<i>Pissodes</i> sp.	Coleoptera: Curculionidae	22
<i>Pissodes pini</i>	Coleoptera: Curculionidae	1
<i>Pityogenes</i> sp.	Coleoptera: Scolytidae	2
<i>Pityogenes bidentatus</i>	Coleoptera: Scolytidae	1
<i>Pityogenes bistridentatus</i>	Coleoptera: Scolytidae	3
<i>Pityogenes calcaratus</i>	Coleoptera: Scolytidae	1
<i>Pityogenes chalcographus</i>	Coleoptera: Scolytidae	38
<i>Pityogenes quadridens</i>	Coleoptera: Scolytidae	2
<i>Pityokteines spinidens</i>	Coleoptera: Scolytidae	3
<i>Pityokteines curvidens</i>	Coleoptera: Scolytidae	1
<i>Pityophthorus</i> sp.	Coleoptera: Scolytidae	5
<i>Placosternus</i> sp.	Coleoptera: Cerambycidae	1
<i>Plagionotus christophi</i>	Coleoptera: Cerambycidae	1
Plusiinae spp.	Lepidoptera: Noctuidae	1
<i>Polygraphus</i> sp.	Coleoptera: Scolytidae	1
<i>Polygraphus poligraphus</i>	Coleoptera: Scolytidae	3
<i>Polygraphus subopacus</i>	Coleoptera: Scolytidae	1
<i>Pseudaletia</i> sp.	Lepidoptera: Noctuidae	1
Psychidae spp.	Lepidoptera: Psychidae	1
<i>Pteleobius vittatus</i>	Coleoptera: Scolytidae	1
Pyralidae spp.	Lepidoptera: Pyralidae	1
Pyraustinae spp.	Lepidoptera: Pyralidae	1
<i>Pyrrhidium sanguineum</i>	Coleoptera: Cerambycidae	1
<i>Rhagium</i> sp.	Coleoptera: Cerambycidae	2
<i>Rhyncolus</i> sp.	Coleoptera: Curculionidae	4
<i>Saperda</i> sp.	Coleoptera: Curculionidae	1

Table A-1 Continued. Pest taxa intercepted with solid wood packing materials at U.S. ports of entry or warehouses during 1996–98 as recorded in the PIN-309 data base as of June 10–16, 1999. Total interceptions = 1,205.

Pest	Order: Family	Number of Interceptions 1996–98
Scolytidae spp.	Coleoptera: Scolytidae	142
<i>Scolytus</i> sp.	Coleoptera: Scolytidae	4
<i>Shirahoshizo</i> sp.	Coleoptera: Curculionidae	9
<i>Sinoxylon</i> sp.	Coleoptera: Bostrichidae	2
<i>Sinoxylon analae</i>	Coleoptera: Bostrichidae	18
<i>Sinoxylon conigerum</i>	Coleoptera: Bostrichidae	18
<i>Sinoxylon crassum</i>	Coleoptera: Bostrichidae	1
<i>Sipalinus</i> sp.	Coleoptera: Curculionidae	1
<i>Sirex noctilio</i>	Hymenoptera: Siricidae	1
Siricidae spp.	Hymenoptera: Siricidae	25
<i>Stenodontes</i> sp.	Coleoptera: Cerambycidae	1
<i>Stromatium barbatum</i>	Coleoptera: Cerambycidae	1
<i>Taphrorychus</i> sp.	Coleoptera: Scolytidae	4
<i>Taphrorychus bicolor</i>	Coleoptera: Scolytidae	2
<i>Taphrorychus villifrons</i>	Coleoptera: Scolytidae	2
Tineidae spp.	Lepidoptera: Tineidae	3
<i>Tomicus minor</i>	Coleoptera: Scolytidae	6
<i>Tomicus piniperda</i>	Coleoptera: Scolytidae	12
<i>Tomolips</i> sp.	Coleoptera: Curculionidae	1
<i>Trichoferus</i> sp.	Coleoptera: Cerambycidae	2
<i>Xyloborinus</i> sp.	Coleoptera: Scolytidae	1
<i>Xyleborus</i> sp.	Coleoptera: Scolytidae	5
<i>Xyleborus eurygraphus</i>	Coleoptera: Scolytidae	10
<i>Xyleborus validus</i>	Coleoptera: Scolytidae	1
<i>Xylechinus pilosus</i>	Coleoptera: Scolytidae	1
<i>Xylotriphs flavipes</i>	Coleoptera: Bostrichidae	1
<i>Xylotrechus</i> sp.	Coleoptera: Cerambycidae	18
<i>Xylotrechus grayi</i>	Coleoptera: Cerambycidae	1
<i>Xylotrechus magnicollis</i>	Coleoptera: Cerambycidae	1
Total interceptions		1,205 (avg. 402/yr)

Table A-2. Summary of taxonomic families intercepted in cargo shipments containing solid wood packing materials at U.S. ports of entry during 1996–98 as recorded in the PIN-309 data base as of June 10–16, 1999. Total Interceptions = 1,205.

Taxonomic group	Common name	Number of interceptions 1996–98	Percent of interceptions
Family Scolytidae, Order Coleoptera	Bark beetles	547	45
Family Cerambycidae, Order Coleoptera	Long-horned beetles	420	35
Family Curculionidae, Order Coleoptera	Weevils and snout beetles	69	6
Family Bostrichidae, Order Coleoptera	Branch and twig borers	50	4
Family Buprestidae, Order Coleoptera	Metallic wood-boring beetles	37	3
Family Siricidae, Order Hymenoptera	Horntails, woodwasps	26	2
Family Formicidae, Order Hymenoptera	Ants	10	<1
Family Noctuidae, Order Lepidoptera	Noctuids, cutworms, loopers	10	<1
Family Elateridae, Order Coleoptera	Click beetles	3	<1
Family Pyralidae, Order Lepidoptera	Snout and grass moths	4	<1
Family Tenebrionidae, Order Coleoptera	Darkling beetles	4	<1
Family Arctiidae, Order Lepidoptera	Tiger moths	3	<1
Family Tineidae, Order Lepidoptera	Clothes moths	3	<1
Family Cossidae, Order Lepidoptera	Carpenter and leopard moths	2	<1
Family Kalotermitidae, Order Isoptera	Termites	2	<1
Family Cynipidae, Order Hymenoptera	Gall wasps	1	<1
Family Geometridae, Order Lepidoptera	Inchworms	1	<1
Family Lasiocampidae, Order Lepidoptera	Tent caterpillars	1	<1
Family Lymantriidae, Order Lepidoptera	Tussock moths	1	<1
Family Psychidae, Order Lepidoptera	Bagworms	1	<1
Family Rhinotermitidae, Order Isoptera	Termites	1	<1
Family Dematiaceae, Deuteromycetes	Imperfect fungi	1	<1
Family undetermined, Order Coleoptera	Beetles	4	<1
Family undetermined, Order Lepidoptera	Moths and butterflies	3	<1
Family undetermined, Order Hymenoptera	Bees, wasps, sawflies, ants	1	<1

Table A-3. Countries of origin for cargo from which exotic pests were intercepted with solid wood packing materials at U.S. ports of entry during 1996–98 as recorded in the PIN-309 data base as of June 10–16, 1999. Total interceptions = 1,205.

Country of origin	Number of interceptions 1996–98	Percent of interceptions
China	467 (includes 5 uncertain ¹)	39
Italy	189	16
Spain	79 (includes 1 uncertain)	6
Germany	56	5
India	47 (includes 1 uncertain)	4
Turkey	39 (includes 1 uncertain)	3
Portugal	33	3
South Africa	25	2
Belgium	24	2
Russian Federation	24	2
France	22	2
Mexico	21 (includes 3 uncertain)	2
Japan	13	1
Greece	11	<1
Honduras	10	<1
Colombia	9	<1
Venezuela	8	<1
Brazil	5	<1
Europe (Continent, Country Unidentified)	5	<1
Netherlands	5	<1
Philippines	5	<1
Republic of China (Taiwan)	5	<1
Singapore	5	<1
Asia (Continent, Country Unidentified)	4	<1
Indonesia	4	<1
Poland	4	<1
United Kingdom	4	<1
Argentina	3	<1
Australia	3	<1
Finland	3	<1
Hong Kong	3	<1
Panama	3	<1
Peru	3	<1
Romania	3	<1
Thailand	3	<1
Ukraine	3	<1
Bangladesh	2	<1
Canada	2 (includes 1 uncertain)	<1
Chile	2	<1
Denmark	2	<1
Guyana	2	<1
Israel	2	<1
Korea	2	<1

¹Uncertainty regarding country of origin may arise when a pest taxa is not known to occur in the export country listed on the shipping manifest. This situation may occur when cargo is transshipped through the country listed from another unspecified country of origin.

Table A-3 Continued. Countries of origin for cargo from which exotic pests were intercepted with solid wood packing materials at U.S. ports of entry during 1996–98 as recorded in the PIN-309 data base as of June 10–16, 1999. Total interceptions = 1,205.

Country of origin	Number of interceptions 1996–98	Percent of interceptions
Latvia	2	<1
Saudi Arabia	2	<1
Sweden	2	<1
Azerbaijan	1	<1
Belize	1	<1
Côte d'Ivoire	1	<1
Czechoslovakia (former)	1	<1
Ecuador	1	<1
Fiji	1	<1
Ghana	1	<1
Guatemala	1	<1
Lithuania	1	<1
Malaysia	1	<1
Morocco	1	<1
South Korea	1	<1
Sri Lanka	1	<1
Suriname	1	<1
Switzerland	1	<1
United Arab Emirates	1	<1
Vietnam	1	<1
Yugoslavia	1	<1
Zaire	1	<1
Zimbabwe	1	<1
Unknown	15	1

Table A-4. Continents of origin for cargo from which exotic pests were intercepted with solid wood packing materials at U.S. ports of entry during 1996–98 as recorded in the PIN-309 data base as of June 10–16, 1999. Total interceptions = 1,205.

Continent of origin	Number of Interceptions 1996–98	Percent of interceptions
Asia	633 (includes 7 uncertain ¹)	52
Europe	451 (includes 1 uncertain)	37
North America	38 (includes 4 uncertain)	3
South America	34	3
Africa	30	2
Oceania	4	<1
Unknown	15	1

¹Uncertainty regarding country (and therefore continent) of origin may arise when a pest taxa is not known to occur in the export country listed on the shipping manifest. This situation may occur when cargo is transshipped through the country listed from another unspecified country of origin.

Table A-5. Destination State or territory as indicated on shipping manifest for cargo from which exotic pests were intercepted with solid wood packing materials at U.S. ports of entry during 1996–98 as recorded in the PIN-309 data base as of June 10–16, 1999. Total interceptions = 1,205.

Destination State or territory	Number of interceptions 1996–98	Percent of interceptions
California	264	22
Florida	190	16
Texas	169	14
New Jersey	79	6
Georgia	77	6
North Carolina	56	5
Washington	42	3
Ohio	41	3
New York	29	2
Tennessee	28	2
Pennsylvania	23	2
Louisiana	22	2
Oregon	22	2
Kentucky	19	2
South Carolina	18	1
Michigan	13	1
Illinois	11	<1
Alabama	10	<1
Massachusetts	8	<1
Arizona	7	<1
Virginia	7	<1
Maryland	6	<1
Puerto Rico	6	<1
Colorado	5	<1
Minnesota	5	<1
Missouri	4	<1
Wisconsin	4	<1
Hawaii	3	<1
Nebraska	3	<1
Oklahoma	3	<1
Arkansas	2	<1
Connecticut	2	<1
Indiana	2	<1
Iowa	2	<1
Rhode Island	2	<1
Delaware	1	<1
Maine	1	<1
Mississippi	1	<1
Nevada	1	<1
South Dakota	1	<1
Utah	1	<1
Unknown	15	1