

1 **Product-by-product testing results and comments.**
2

3 Each of the product narratives that follow begin with the product number within the
4 study and short product description with a product description materials provided by the
5 retailer (retaining critical product claim information, but not using exact text so that the
6 manufacturer cannot be easily searched for), then are followed by a description of the expected
7 scientific name based on the product description along with any caveats associated with that
8 claim. The actual wood identifications are reported next, with any additional information about
9 the interface between uncertainty in the claim and inherent uncertainty in the identification.
10

11 WWF-WA1 Kitchen item made from a block of Chinese oak:

12 Chinese oak is presumed to be a species of *Quercus*, but could also potentially include
13 *Pasania* and *Cyclobalanopsis*. Wood anatomy recognizes three groups of species within
14 *Quercus*, the red oak group, the white oak group, and the live oak group.

15 The specimens from this product were identified as: *Fraxinus*. This is not
16 consistent with the species claim. *Fraxinus* is a ring-porous hardwood like
17 *Quercus* but is easily distinguished.
18

19 WWF-WA2 Mahogany wood handle:

20 Mahogany is presumed to be a species of *Swietenia*, unless the name is preceded by
21 some other modifier (e.g. African mahogany, which is presumed to be *Khaya*, or
22 Philippine mahogany, which is presumed to be *Shorea*.) All three accepted species of
23 *Swietenia* are CITES Appendix II species, meaning that any product made from *Swietenia*
24 should reasonably be traceable back to a valid CITES export/import permit. The
25 presence of CITES-controlled species in either Appendix II or Appendix III in a wood
26 product should probably be considered at least a yellow flag. Any CITES Appendix I
27 wood is fully prohibited from trade and is an automatic red flag. There is also a claim of
28 figured wood. Addressing the vagueness associated with the use of the word ‘figure’ is
29 beyond the scope of this report, but it is important to note that no evaluation of the
30 presence or absence of figure was made in this study.

31 The specimens from this product were identified as: *Entandrophragma* cf.
32 *cylindricum* or sapele, from Africa. This is not consistent with the species claim.
33 While sapele and mahogany are in the same botanical family they are in
34 different genera and a number of features separate them.
35

36 WWF-WA3 Chair made from rubberwood:

37 Rubberwood is presumed to be *Hevea brasiliensis*. From a wood technology
38 perspective, *Hevea* would not normally be considered among the set of “densely
39 grained and sturdy” woods, nor would it be considered light, soft, or weak.

40 The specimens from this product were identified as: *Acacia* cf. *confusa* and
41 *Hevea* cf. *brasiliensis*. Because *Acacia* was found, this is not consistent with the
42 species claim - *Acacia* cf. *confusa* and *Hevea brasiliensis* are not confusable. Of
43 note, however, is that both species are common plantation species in Asia.
44

45 WWF-WA4 Mahogany table:
46 Mahogany is presumed to be a species of *Swietenia*, unless the name is preceded by
47 some other modifier (e.g. African mahogany, which is presumed to be *Khaya*, or
48 Philippine mahogany, which is presumed to be *Shorea*.) All three accepted species of
49 *Swietenia* are CITES Appendix II species, meaning that any product made from *Swietenia*
50 should reasonably be traceable back to a valid CITES export/import permit. The
51 presence of CITES-controlled species in either Appendix II or Appendix III in a wood
52 product should probably be considered at least a yellow flag. Any CITES Appendix I
53 wood is fully prohibited from trade and is an automatic red flag.

54 The specimens from this product were identified as: *Swietenia* sp. This is
55 consistent with the species claim.
56

57 WWF-WA5 Rosewood handle:
58 Rosewood is presumed to refer to any species of *Dalbergia*, unless the name is preceded
59 by some other modifier (e.g. tiete rosewood, which is presumed to be *Guibourtia*
60 *chodatiana*). All species of *Dalbergia* are now CITES Appendix II species, meaning that
61 any product made from *Dalbergia* should reasonably be traceable back to a valid CITES
62 export/import permit. The presence of CITES-controlled species in either Appendix II or
63 Appendix III in a wood product should probably be considered at least a yellow flag. Any
64 CITES Appendix I wood is fully prohibited from trade and is an automatic red flag.

65 The specimens from this product were identified as: *Guibourtia* cf. *tessmannii*.
66 This is not consistent with the species claim, and further would likely represent a
67 CITES violation.
68

69 WWF-WA6 Small table made from solid sepetir wood, walnut veneer, and finished
70 engineered wood:

71 Sepetir is presumed to refer to species of *Sindora*, and walnut to refer to species of
72 *Juglans*, specifically those that are not a part of the butternut group, which is
73 anatomically distinguishable from the core walnuts, which are in turn separable into the
74 tropical black walnuts, the North American walnuts, and European walnut (Miller 1976).

75 The specimens from this product were identified as: *Eucalyptus* sp. and *Betula*
76 sp., other wood particles that could not be identified, as well as *Hevea* cf.
77 *brasiliensis*. None of these are consistent with the species claim.
78

79 WWF-WA7 Hand tool with a mahogany handle:

80 Mahogany is presumed to be a species of *Swietenia*, unless the name is preceded by
81 some other modifier (e.g. African mahogany, which is presumed to be *Khaya*, or
82 Philippine mahogany, which is presumed to be *Shorea*.) All three accepted species of
83 *Swietenia* are CITES Appendix II species, meaning that any product made from *Swietenia*
84 should reasonably be traceable back to a valid CITES export/import permit. The
85 presence of CITES-controlled species in either Appendix II or Appendix III in a wood
86 product should probably be considered at least a yellow flag. Any CITES Appendix I
87 wood is fully prohibited from trade and is an automatic red flag.

88 The specimens from this product were identified as: *Carya* sp. This is not
89 consistent with the species claim. *Carya* is a superior choice for a pick handle, as
90 it is famed for its density, strength, and especially its impact resistance.

91

92 WWF-WA8 Table made from keruing wood:

93 Keruing is presumed to refer to any of a number of species of *Dipterocarpus*.

94 The specimens from this product were identified as: *Dipterocarpus* sp.. This is
95 consistent with the species claim.

96

97 WWF-WA9 Seat made from keruing wood:

98 Keruing is presumed to refer to any of a number of species of *Dipterocarpus*.

99 The specimens from this product were identified as: *Eucalyptus* sp. This is not
100 consistent with the species claim. *Eucalyptus* and *Dipterocarpus* are neither
101 confusable nor interchangeable for most applications.

102

103 WWF-WA10 Kitchen item made from iroko (African teak):

104 African teak is often synonymous with iroko, but also can refer to such a range of woods
105 as to have no meaning. Fortunately, the claim of iroko is much more precise, and is
106 presumed to refer to one of two species of *Milicia*, which is the current scientific name
107 for the genus formerly known as *Chlorophora*, which was once in turn known as
108 *Maclura*. The two species are *Milicia excelsa* and *Milicia regia*, and they are not
109 separable by wood anatomy.

110 The specimens from this product were identified as: *Milicia* cf. *excelsa*. This is
111 consistent with the species claim.

112

113 WWF-WA11 Meranti wood bench:

114 Meranti is presumed to refer to species of *Shorea*. Wood anatomically, *Shorea* is
115 identifiable in five essentially distinct groups, the white merantis, the yellow merantis,
116 the light red merantis, the dark red merantis, and the balau group. Common names for
117 these groups notwithstanding, a wood of the balau group would be considered
118 consistent with a general product claim of meranti, as both are still *Shorea*. If the claim
119 were a specific meranti (e.g. yellow meranti) then an identification of any of the other
120 merantis would be inconsistent.

121 The specimens from this product were identified as: *Shorea* sp., light red meranti
122 group. This is consistent with the species claim.

123

124 WWF-WA12 Kitchen item made with solid oak top:

125 Oak is presumed to be a species of *Quercus*. Wood anatomy recognizes three groups of
126 species within *Quercus*, the red oak group, the white oak group, and the live oak group.

127 The specimens from this product were identified as: *Quercus*, white oak group.

128 This is consistent with the species claim.

129

130 WWF-WA13 Taun solid wood flooring:

131 Taun is presumed to be a species of *Pometia*, probably *P. pinnatum*.

132 The specimens from this product were identified as: *Xerospermum* sp., closely
133 related to the claimed species, but once the product claim was known, it was
134 possible to confirm that the specimens was fully consistent with *Pometia*.

135

136 WWF-WA14 Solid mahogany table:

137 Mahogany is presumed to be a species of *Swietenia*, unless the name is preceded by
138 some other modifier (e.g. African mahogany, which is presumed to be *Khaya*, or
139 Philippine mahogany, which is presumed to be *Shorea*.) All three accepted species of
140 *Swietenia* are CITES Appendix II species, meaning that any product made from *Swietenia*
141 should reasonably be traceable back to a valid CITES export/import permit. The
142 presence of CITES-controlled species in either Appendix II or Appendix III in a wood
143 product should probably be considered at least a yellow flag. Any CITES Appendix I
144 wood is fully prohibited from trade and is an automatic red flag.

145 The specimens from this product were identified as: *Swietenia* sp.. This is
146 consistent with the species claim.

147

148 WWF-WA15 Acacia kitchen implement:

149 Acacia is the common name for the genus *Acacia* (as with *Boa constrictor* or
150 *Tyrannosaurus rex*). It is worth noting that most authors and texts are using the old
151 definition of *Acacia*, which is quite distinct from the modern definition of the genus
152 which is now restricted to predominantly to species from Australia. The iconic *Acacia* of
153 the African savanna are now relegated to the genus *Senegalia*, other species to
154 *Vachellia*, and the former *Acacia* of the new world are mostly in the genera *Mariosousa*
155 and *Acaciella*. In this report, we use the concept of *Acacia sensu lato*. This usage should
156 provide the most generous interpretation of a given product claim with the greatest
157 benefit of the doubt provided to the company. Additionally, the level of botanical
158 confusion surrounding this issue is high, even for botanists, so it is plausible that a
159 responsible effort to engage in due diligence surrounding importing “*Acacia*” that is
160 actually *Vachellia* could result in unintentional and nearly unavoidable
161 ‘misrepresentation’. Using the former, broader definition of *Acacia* will minimize this
162 problem.

163 The specimens from this product were identified as: *Acacia* cf. *confusa*. This is
164 consistent with the species claim.

165

166 WWF-WA16 Bubinga instrument:

167 Bubinga is presumed to include the African species of *Guibourtia*, including *G. demeusii*,
168 *G. arnoldiana*, *G. tessmannii*, and *G. ehie*. Three species in the genus are CITES Appendix
169 II species, *G. tessmannii*, *G. demeusei*, and *G. pellgriniana*, meaning that any product
170 made from one of these species should reasonably be traceable back to a valid CITES
171 export/import permit, however, the CITES and non-CITES species in the genus cannot be
172 separated by wood anatomy. The presence of CITES-controlled species in either
173 Appendix II or Appendix III in a wood product should probably be considered at least a
174 yellow flag even if species level identification is not possible. Any CITES Appendix I
175 wood is fully prohibited from trade and is an automatic red flag.

176 The specimens from this product were identified as: *Guibourtia* sp. This is
177 consistent with the species claim.

178
179 WWF-WA17 Brazilwood violin bow with ebony frog:

180 Brazilwood is presumed to be *Caesalpinia echinata*, the classically preferred wood for
181 violin bows, and the subject of significant research into wood properties that predict
182 musical quality for this application. *Caesalpinia echinata* is a CITES Appendix II species,
183 meaning that any product made from *Caesalpinia echinata* should reasonably be
184 traceable back to a valid CITES export/import permit. The presence of CITES-controlled
185 species in either Appendix II or Appendix III in a wood product should probably be
186 considered at least a yellow flag. Any CITES Appendix I wood is fully prohibited from
187 trade and is an automatic red flag.

188 Ebony is presumed to be any species of *Diospyros*. All Madagascar species of *Diospyros*
189 are CITES Appendix II species, meaning that any product made from *Diospyros* should be
190 evaluated to determine the likely origin of the wood, and should it come from
191 Madagascar, it should reasonably be traceable back to a valid CITES export/import
192 permit. The presence of CITES-controlled species in either Appendix II or Appendix III in
193 a wood product should probably be considered at least a yellow flag. Any CITES
194 Appendix I wood is fully prohibited from trade and is an automatic red flag.

195 The specimens from this product were identified as: Sapotaceae consistent with
196 *Manilkara* for the wood claimed as *Caesalpinia*, and *Dalbergia* cf. *melanoxylon*
197 for the wood claimed as *Diospyros*. Neither of these are consistent with the
198 species claim, and the presence of any *Dalbergia* is likely a CITES violation.

199
200 WWF-WA18 Sporting implement made of ayous, zebrano (Zebrawood), and spruce:

201 Ayous is presumed to be *Triplochiton scleroxylon*, though it may also refer to
202 *Triplochiton zambesicus*, which is not known to be separable by wood anatomy from *T.*
203 *scleroxylon*.

204 Zebrano is presumed to be *Microberlinia brazzavillensis*.

205 Spruce is presumed to be a species of *Picea*, most of which are not separable by wood
206 anatomy.

207 The specimens from this product were identified as: *Triplochiton* sp.,
208 *Microberlinia* sp., and *Paulownia* sp. With the exception of the last wood, these
209 are consistent with the species claim. *Paulownia*, a ring-porous hardwood, is not
210 at all confusable with *Picea*, a softwood with gradual intra-annual transition and
211 thus this product is misrepresented.

212
213 WWF-WA19 Table originally claimed to be rosewood, but over the course of the study
214 reported on the website as pine.

215 Rosewood is presumed to refer to any species of *Dalbergia*, unless the name is preceded
216 by some other modifier (e.g. tiete rosewood, which is presumed to be *Guibourtia*
217 *chodatiana*). All species of *Dalbergia* are now CITES Appendix II species, meaning that
218 any product made from *Dalbergia* should reasonably be traceable back to a valid CITES
219 export/import permit. The presence of CITES-controlled species in either Appendix II or

220 Appendix III in a wood product should probably be considered at least a yellow flag. Any
221 CITES Appendix I wood is fully prohibited from trade and is an automatic red flag.
222 Pine is presumed to refer to any species of *Pinus*, unless the name is preceded by a
223 modifier (e.g. Chilean pine or Norfolk pine – *Araucaria*, or silver pine – *Dacrydium*, etc.)
224 unless that modified refers to one of the identifiable subgroups within *Pinus* (e.g. white
225 pine, red pine, yellow pine, hard pines, soft pines).

226 The specimens from this product were identified as fibers of: species in the
227 yellow pine group (*Pinus*), in the white/red pine group (*Pinus*), *Quercus*,
228 *Liquidambar*, and possibly *Pseudotsuga*. This is not consistent with either
229 species claim, the original one of *Dalbergia*, nor the later claim of pine.

230

231 WWF-WA20 Balau chair with a clarifying claim of acacia:

232 Balau is presumed to be a species of *Shorea*, specifically a high-density species
233 belonging to the identifiable ‘balau group’.

234 Acacia is the common name for the genus *Acacia* (as with *Boa constrictor* or
235 *Tyrannosaurus rex*). It is worth noting that most authors and texts are using the old
236 definition of *Acacia*, which is quite distinct from the modern definition of the genus
237 which is now restricted to predominantly to species from Australia. The iconic *Acacia* of
238 the African savanna are now relegated to the genus *Senegalia*, other species to
239 *Vachellia*, and the former *Acacia* of the new world are mostly in the genera *Mariosousa*
240 and *Acaciella*. In this report, we use the concept of *Acacia sensu lato*. This usage should
241 provide the most generous interpretation of a given product claim with the greatest
242 benefit of the doubt provided to the company. Additionally, the level of botanical
243 confusion surrounding this issue is high, even for botanists, so it is plausible that a
244 responsible effort to engage in due diligence surrounding importing “*Acacia*” that is
245 actually *Vachellia* could result in unintentional and nearly unavoidable
246 ‘misrepresentation’. Using the former, broader definition of *Acacia* will minimize this
247 problem. For this product, we do not understand how to interpret the ‘oil’ designation,
248 other than potentially as a descriptor of a finish.

249 The specimens from this product were identified as: *Acacia cf. mangium*. This is
250 not consistent with the species claim, and *Acacia* and *Shorea* are not confusable,
251 nor are the properties of *Acacia mangium* comparable to balau.

252 Because the primary claim is listed as balau, this is treated as misrepresented.

253

254 WWF-WA21 Rosewood hand implement:

255 Rosewood is presumed to refer to any species of *Dalbergia*, unless the name is preceded
256 by some other modifier (e.g. tiete rosewood, which is presumed to be *Guibourtia*
257 *chodatiana*). All species of *Dalbergia* are now CITES Appendix II species, meaning that
258 any product made from *Dalbergia* should reasonably be traceable back to a valid CITES
259 export/import permit. The presence of CITES-controlled species in either Appendix II or
260 Appendix III in a wood product should probably be considered at least a yellow flag. Any
261 CITES Appendix I wood is fully prohibited from trade and is an automatic red flag.

262 The specimens from this product were identified as: *Dalbergia cf. sissoo*. This is
263 consistent with the species claim, which also indicated “Made in India” which is

264 further consistent. Nonetheless, the presence of *Dalbergia* could be a CITES
265 violation.

266
267 WWF-WA22 Purpleheart and maple sporting implement.

268 Purpleheart is presumed to be a species of *Peltogyne*.

269 Canadian maple is presumed to be any species of *Acer* from Canada, but most likely
270 referring to the iconic Canada sugar maple, *Acer saccharum*. Separating *Acer saccharum*
271 of Canadian rather than U.S. origin is not possible by wood anatomy.

272 The specimens from this product were identified as: *Peltogyne* sp. and *Betula* sp.

273 This is not consistent with the species claim, as *Acer* and *Betula* should not be
274 confused or mixed in trade, despite being superficially similar in appearance.

275

276 WWF-WA23 Brazilian Cherry and/or harvest mahogany ceiling fan.

277 Brazilian cherry is presumed to be any of the species of *Hymenaea*.

278 Harvest mahogany is presumed to be a species of *Swietenia*. All three accepted species
279 of *Swietenia* are CITES Appendix II species, meaning that any product made from
280 *Swietenia* should reasonably be traceable back to a valid CITES export/import permit.

281 The presence of CITES-controlled species in either Appendix II or Appendix III in a wood
282 product should probably be considered at least a yellow flag. Any CITES Appendix I
283 wood is fully prohibited from trade and is an automatic red flag.

284 The specimens from this product were identified as: *Populus* sp. This is not
285 consistent with the species claim. *Populus* and *Hymenaea* are quite disparate
286 (density, color, origin, uses) and not at all confusable.

287

288 WWF-WA24 Ipe flooring tiles:

289 Ipe is presumed to be any species of *Handroanthus*. In the past, these woods were
290 known as *Tabebuia* spp., lapacho group, as the genus *Tabebuia* had two groups of
291 species with quite distinct wood anatomy and wood properties. The species producing
292 the ipe-type wood were moved into a new genus, *Handroanthus*, which is consistent
293 with wood anatomy.

294 The specimens from this product were identified as: *Handroanthus* sp. This is
295 consistent with the species claim.

296

297 WWF-WA25 Jatoba and maple veneer board game:

298 Jatoba is presumed to be any of the species of *Hymenaea*.

299 Maple is presumed to be a species of *Acer*.

300 The specimens from this product were identified as: a species in the red oak
301 group (*Quercus*), and a tropical hardwood consistent with *Hymenaea*. This is
302 consistent with the species claim, because the claim of maple is presumed to
303 pertain to the light colored squares on the play surface (which were not
304 submitted for testing), whereas *Quercus* was the backing veneer for the board,
305 and there was no clear claim for that wood.

306

307

308 WWF-WA26 Nyato:
309 Nyato (or nyatoh) is presumed to be any species of *Palaquium*, but also can refer to
310 *Payena*, *Pouteria*, *Madhuca*, and other Asian Sapotaceae. Because most of these genera
311 are not definitively separable by wood anatomy, further because the family is in the
312 process of near-constant botanical revision, and still further because the trade name
313 nyatoh is not entirely specific, any Sapotaceae consistent with the Asian members of the
314 family are considered correctly specified.

315 The specimens from this product were identified as: *Palaquium/Payena* sp. This
316 is consistent with the species claim.

317
318 WWF-WA27 Particle board, meranti wood, veneer, plywood, and engineered wood table:
319 Meranti is presumed to refer to species of *Shorea*. Wood anatomically, *Shorea* is
320 identifiable in five essentially distinct groups, the white merantis, the yellow merantis,
321 the light red merantis, the dark red merantis, and the balau group. Common names for
322 these groups notwithstanding, a wood of the balau group would be considered
323 consistent with a general product claim of meranti, as both are still *Shorea*. If the claim
324 were a specific meranti (e.g. yellow meranti) then an identification of any of the other
325 merantis would be inconsistent.

326 The specimens from this product were identified as: *Shorea* sp. This is consistent
327 with the species claim.

328
329 WWF-WA28 Brazilian Teak Cumaru flooring products:
330 Brazilian teak and cumaru are both understood to be species of *Dipteryx*, especially
331 those species from Brazil. A Central American species in this genus is CITES-controlled;
332 separation of the CITES from the non-CITES species cannot be achieved by wood
333 anatomy alone, and depends in part on information about the origin of the wood. That
334 said, very little Central American *Dipteryx* is known to enter the U.S. market, whereas
335 imports of this genus from Brazil are common.

336 The specimens from this product were identified as: *Guibourtia* sp. or *Hymenaea*
337 sp. Neither genus is consistent with the species claim, nor are either confusable
338 with *Dipteryx*.

339
340 WWF-WA29 Guitar:
341 29A = spruce (website), cedar (product box)
342 29B = rosewood (website)
343 29C = mahogany (website)
344 29D = sapele (website), linden (product box)
345 29E = non-claimed species (piece inside guitar body to stabilize neck)":

346 Spruce is presumed to be a species of *Picea*, most of which are not separable by wood
347 anatomy.

348 Cedar is nigh to meaningless – it can any of a wide range of species of a number of
349 genera. In the American market cedar (without any modifiers) is understood to be a
350 good-smelling softwood, with modifiers to the common name typically indicating
351 increased specificity.

352 Rosewood is presumed to refer to any species of *Dalbergia*, unless the name is preceded
353 by some other modifier (e.g. tiete rosewood, which is presumed to be *Guibourtia*
354 *chodatiana*). All species of
355 Mahogany is presumed to be a species of *Swietenia*, unless the name is preceded by
356 some other modifier (e.g. African mahogany, which is presumed to be *Khaya*, or
357 Philippine mahogany, which is presumed to be *Shorea*.) All three accepted species of
358 *Swietenia* are CITES Appendix II species, meaning that any product made from *Swietenia*
359 should reasonably be traceable back to a valid CITES export/import permit. The
360 presence of CITES-controlled species in either Appendix II or Appendix III in a wood
361 product should probably be considered at least a yellow flag. Any CITES Appendix I
362 wood is fully prohibited from trade and is an automatic red flag.
363 *Dalbergia* are now CITES Appendix II species, meaning that any product made from
364 *Dalbergia* should reasonably be traceable back to a valid CITES export/import permit.
365 The presence of CITES-controlled species in either Appendix II or Appendix III in a wood
366 product should probably be considered at least a yellow flag. Any CITES Appendix I
367 wood is fully prohibited from trade and is an automatic red flag.
368 Sapele is presumed to be *Entandrophragma cylindricum*, which is fairly reliably
369 separable from other species of *Entandrophragma* and is typically sold as a distinct
370 species.

371 The specimens from this product were identified as: *Picea* cf. *smithiana* or *Picea*
372 cf. *morrisonicola*, *Dalbergia* cf. *latifolia*, *Entandrophragma* cf. *cylindricum*,
373 *Canarium schweinfurthii* or *Aucoumea klaineana*, and *Chrysophyllum* sp. The
374 penultimate wood is not consistent with the product claim of mahogany, nor is it
375 reasonably confusable with the claimed species. The final wood is also not on
376 the list, but it was from a portion of the guitar with no specific claim.

377
378 WWF-WA30 Abarco flooring product:

379 Abarco is presumed to be a species of *Cariniana*, often in the literature specifically as
380 *Cariniana pyriformis*.

381 The specimens from this product were identified as: *Manilkara* sp. This is not
382 consistent with the species claim.

383
384 WWF-WA31 Sapele mahogany window treatments:

385 Sapele is presumed to be *Entandrophragma cylindricum*, which is fairly reliably
386 separable from other species of *Entandrophragma* and is typically sold as a distinct
387 species.

388 The specimens from this product were identified as: *Khaya* sp., and
389 *Entandrophragma* cf. *cylindricum*, the former of which is not consistent with the
390 species claim.

391
392 WWF-WA32 Relaxation item with cumaru wood:

393 Cumaru is understood to be species of *Dipteryx*, especially those species from Brazil. A
394 Central American species in this genus is CITES-controlled; separation of the CITES from
395 the non-CITES species cannot be achieved by wood anatomy alone, and depends in part

396 on information about the origin of the wood. That said, very little Central American
397 *Dipteryx* is known to enter the U.S. market, whereas imports of this genus from Brazil
398 are common.

399 The specimens from this product were identified as: *Dipteryx* sp.. This is
400 consistent with the species claim.

401

402 WWF-WA33 Solid ramin and oak

403 33A (Rung - claimed to be ramin)

404 33B (Bottom shelf veneer - labeled as oak) :

405 Ramin is presumed to be a species of *Gonystylus*, all of which are CITES Appendix II
406 species, meaning that any product made from *Gonystylus* should reasonably be
407 traceable back to a valid CITES export/import permit. The presence of CITES-controlled
408 species in either Appendix II or Appendix III in a wood product should probably be
409 considered at least a yellow flag. Any CITES Appendix I wood is fully prohibited from
410 trade and is an automatic red flag.

411 Oak is presumed to be a species of *Quercus*. Wood anatomy recognizes three groups of
412 species within *Quercus*, the red oak group, the white oak group, and the live oak group.

413 The specimens from this product were identified as: a species in the yellow pine
414 group (*Pinus*) for the wood claimed as *Gonystylus*, and the oak finish shelf was
415 wood-patterned paper adhered to MDF composed of fibers of *Pinus*, *Quercus*,
416 *Tilia*, and possibly *Fagus*. Neither result, especially the pine rung, is consistent
417 with the species claim.

418

419 WWF-WA34 North American ash kitchen item:

420 Ash is presumed to be a species of *Fraxinus*.

421 The specimens from this product were identified as: *Fraxinus* sp. This is
422 consistent with the species claim.

423

424 WWF-WA35 Sporting implement with rosewood insert:

425 Rosewood is presumed to refer to any species of *Dalbergia*, unless the name is preceded
426 by some other modifier (e.g. tiete rosewood, which is presumed to be *Guibourtia*
427 *chodatiana*). All species of *Dalbergia* are now CITES Appendix II species, meaning that
428 any product made from *Dalbergia* should reasonably be traceable back to a valid CITES
429 export/import permit. The presence of CITES-controlled species in either Appendix II or
430 Appendix III in a wood product should probably be considered at least a yellow flag. Any
431 CITES Appendix I wood is fully prohibited from trade and is an automatic red flag.

432 The specimens from this product were identified as: *Hymenaea* sp. or *Guibourtia*
433 sp., more likely the latter. This is not consistent with the species claim, and
434 could constitute a CITES violation.

435

436 WWF-WA36 Palisander (Rosewood) kitchen implements:

437 Rosewood is presumed to refer to any species of *Dalbergia*, unless the name is preceded
438 by some other modifier (e.g. tiete rosewood, which is presumed to be *Guibourtia*
439 *chodatiana*). All species of *Dalbergia* are now CITES Appendix II species, meaning that

440 any product made from *Dalbergia* should reasonably be traceable back to a valid CITES
441 export/import permit. The presence of CITES-controlled species in either Appendix II or
442 Appendix III in a wood product should probably be considered at least a yellow flag. Any
443 CITES Appendix I wood is fully prohibited from trade and is an automatic red flag.

444 The specimens from this product were identified as: *Dalbergia* sp. This is
445 consistent with the species claim, but may still constitute a CITES violation.

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447 WWF-WA37 Sheesham table:

448 Sheesham (more commonly in the technical literature as shisham) is understood to be
449 one of two species of *Dalbergia*, either *Dalbergia sissoo* or *Dalbergia latifolia*. In the
450 latter case, shisham would usually only be applied to *D. latifolia* of Indian or near-India
451 origin, not from this species in southeast Asia. More commonly, shisham is considered
452 more specific of *D. sissoo*. All species of *Dalbergia* are now CITES Appendix II species,
453 meaning that any product made from *Dalbergia* should reasonably be traceable back to
454 a valid CITES export/import permit. The presence of CITES-controlled species in either
455 Appendix II or Appendix III in a wood product should probably be considered at least a
456 yellow flag. Any CITES Appendix I wood is fully prohibited from trade and is an
457 automatic red flag.

458 The specimens from this product were identified as: *Dalbergia cf. sissoo*. This is
459 consistent with the species claim, but may still constitute a CITES violation.

460

461 WWF-WA38 Ramin wood sporting item:

462 Ramin is presumed to be a species of *Gonystylus*, all of which are CITES Appendix II
463 species, meaning that any product made from *Gonystylus* should reasonably be
464 traceable back to a valid CITES export/import permit. The presence of CITES-controlled
465 species in either Appendix II or Appendix III in a wood product should probably be
466 considered at least a yellow flag. Any CITES Appendix I wood is fully prohibited from
467 trade and is an automatic red flag.

468 The specimens from this product were identified as species in the red pine group
469 (*Pinus*). This is not consistent with the species claim – *Pinus* and *Gonystylus* are
470 not interchangeable.

471

472 WWF-WA39 Oak light switch plate:

473 Oak is presumed to be a species of *Quercus*. Wood anatomy recognizes three groups of
474 species within *Quercus*, the red oak group, the white oak group, and the live oak group.

475 The specimens from this product were identified as: a species in the red oak
476 group (*Quercus*). This is consistent with the species claim.

477

478 WWF-WA40 Ash light switch plate:

479 Ash is presumed to be a species of *Fraxinus*.

480 The specimens from this product were identified as: *Fraxinus* sp. This is
481 consistent with the species claim.

482

483 WWF-WA41 Rosewood tray:

484 Rosewood is presumed to refer to any species of *Dalbergia*, unless the name is preceded
485 by some other modifier (e.g. tiete rosewood, which is presumed to be *Guibourtia*
486 *chodatiana*). All species of *Dalbergia* are now CITES Appendix II species, meaning that
487 any product made from *Dalbergia* should reasonably be traceable back to a valid CITES
488 export/import permit. The presence of CITES-controlled species in either Appendix II or
489 Appendix III in a wood product should probably be considered at least a yellow flag. Any
490 CITES Appendix I wood is fully prohibited from trade and is an automatic red flag.

491 The specimens from this product were identified as: *Dalbergia* cf. *sissoo*. This is
492 consistent with the species claim, but may nonetheless constitute a CITES
493 violation.

494

495 WWF-WA42 Brazilian teak bench:

496 Teak (without any modifiers) is presumed to be *Tectona grandis*. Teak occurs natively in
497 southeast Asia, especially Myanmar, but is grown in plantation across much of the
498 tropical world. Growth rate can be used to make broad inferences about the likelihood
499 of plantation origin of teak. That said, Brazilian teak is usually referring to cumaru
500 (*Dipteryx*). It is not clear from the product advertisement whether they mean *Dipteryx*
501 or *Tectona*.

502 The specimens from this product were identified as: *Tectona* cf. *grandis*. This is
503 consistent with the species claim, given the vagueness of the situation – this is
504 consistency by technicality.

505

506 WWF-WA43 Wenge seat:

507 Wenge is presumed to be any dark, hard, heavy species of *Millettia*, the species of which
508 are not anatomically separable.

509 The specimens from this product were identified as: *Hevea* cf. *brasiliensis*. This is
510 not consistent with the species claim – *Millettia* and *Hevea* are not at all
511 confusable.

512

513 WWF-WA44 Rosewood pen case:

514 Rosewood is presumed to refer to any species of *Dalbergia*, unless the name is preceded
515 by some other modifier (e.g. tiete rosewood, which is presumed to be *Guibourtia*
516 *chodatiana*). All species of *Dalbergia* are now CITES Appendix II species, meaning that
517 any product made from *Dalbergia* should reasonably be traceable back to a valid CITES
518 export/import permit. The presence of CITES-controlled species in either Appendix II or
519 Appendix III in a wood product should probably be considered at least a yellow flag. Any
520 CITES Appendix I wood is fully prohibited from trade and is an automatic red flag.

521 The specimens from this product were identified as: *Lithocarpus* sp. This is not
522 consistent with the species claim, and *Lithocarpus* really bears no semblance to
523 *Dalbergia*.

524

525

526 WWF-WA45 Birch, linden and ramin wood personal beauty item:

527 Birch is presumed to be a species of *Betula*.

528 Linden is presumed to be a species of *Tilia*.
529 Ramin is presumed to be a species of *Gonystylus*, all of which are CITES Appendix II
530 species, meaning that any product made from *Gonystylus* should reasonably be
531 traceable back to a valid CITES export/import permit. The presence of CITES-controlled
532 species in either Appendix II or Appendix III in a wood product should probably be
533 considered at least a yellow flag. Any CITES Appendix I wood is fully prohibited from
534 trade and is an automatic red flag.

535 The specimens from this product were identified as: *Carpinus* sp. This is not
536 consistent with the species claim, but *Carpinus* is typically found in temperate
537 Eurasian products, when found at all.

538

539 WWF-WA46 Birch, linden and ramin wood personal beauty item:

540 Birch is presumed to be a species of *Betula*.

541 Linden is presumed to be a species of *Tilia*.

542 Ramin is presumed to be a species of *Gonystylus*, all of which are CITES Appendix II
543 species, meaning that any product made from *Gonystylus* should reasonably be
544 traceable back to a valid CITES export/import permit. The presence of CITES-controlled
545 species in either Appendix II or Appendix III in a wood product should probably be
546 considered at least a yellow flag. Any CITES Appendix I wood is fully prohibited from
547 trade and is an automatic red flag.

548 The specimens from this product were identified as: *Carpinus* sp. This is not
549 consistent with the species claim, but *Carpinus* is typically found in temperate
550 Eurasian products, when found at all.

551

552 WWF-WA47 Merbau body, mahogany, maple neck, and rosewood fingerboard guitar

553 47A Fingerboard (rosewood)

554 47B,C Neck (mahogany & maple)

555 47D Body (merbau):

556 Rosewood is presumed to refer to any species of *Dalbergia*, unless the name is preceded
557 by some other modifier (e.g. tiete rosewood, which is presumed to be *Guibourtia*
558 *chodatiana*). All species of *Dalbergia* are now CITES Appendix II species, meaning that
559 any product made from *Dalbergia* should reasonably be traceable back to a valid CITES
560 export/import permit. The presence of CITES-controlled species in either Appendix II or
561 Appendix III in a wood product should probably be considered at least a yellow flag. Any
562 CITES Appendix I wood is fully prohibited from trade and is an automatic red flag.

563 Mahogany is presumed to be a species of *Swietenia*, unless the name is preceded by
564 some other modifier (e.g. African mahogany, which is presumed to be *Khaya*, or
565 Philippine mahogany, which is presumed to be *Shorea*.) All three accepted species of
566 *Swietenia* are CITES Appendix II species, meaning that any product made from *Swietenia*
567 should reasonably be traceable back to a valid CITES export/import permit. The
568 presence of CITES-controlled species in either Appendix II or Appendix III in a wood
569 product should probably be considered at least a yellow flag. Any CITES Appendix I
570 wood is fully prohibited from trade and is an automatic red flag.

571 Maple is presumed to be a species of *Acer*. There is the possibility to separate some
572 maples by wood anatomy, so a more precise common name could yield a more testable
573 claim.

574 Merbau is presumed to be *Intsia bijuga*.

575 The specimens from this product were identified as: *Dalbergia*, *Shorea*, *Acer*,
576 *Betula* and *Intsia*. This is not consistent with the species claim, because *Shorea*
577 and *Betula* were not in the claim. It is probable that the “mahogany” could have
578 been intended as Philippine mahogany (which is understood to be *Shorea*) but it
579 was not communicated as such.

580

581 WWF-WA48 Chinese oak furniture:

582 Chinese oak is presumed to be a species of *Quercus*, but could also potentially include
583 *Pasania* and *Cyclobalanopsis*. Wood anatomy recognizes three groups of species within
584 *Quercus*, the red oak group, the white oak group, and the live oak group.

585 The specimens from this product were identified as: *Hevea cf. brasiliensis*. This is
586 not consistent with the species claim – *Hevea* and *Quercus* are neither
587 confusable nor interchangeable.

588

589 WWF-WA49 Solid wood table with an oak veneer top:

590 Oak is presumed to be a species of *Quercus*. Wood anatomy recognizes three groups of
591 species within *Quercus*, the red oak group, the white oak group, and the live oak group.

592 The specimens from this product were identified as: *Hevea cf. brasiliensis*,
593 *Populus sp.*, and red oak group (*Quercus*) veneer over fiberboard. This is
594 consistent with the species claim, as other than the oak veneer, the only claim
595 was “solid wood”.

596

597 WWF-WA50 Pine, albasia and meranti woods, particle board, MDF, and veneer furniture:

598 Pine is presumed to refer to any species of *Pinus*, unless the name is preceded by a
599 modifier (e.g. Chilean pine or Norfolk pine – *Araucaria*, or silver pine – *Dacrydium*, etc.)
600 unless that modified refers to one of the identifiable subgroups within *Pinus* (e.g. white
601 pine, red pine, yellow pine, hard pines, soft pines).

602 Albasia is presumed to be a misspelling of albizia, one common name for woods of the
603 genus *Albizia*.

604 Meranti is presumed to refer to species of *Shorea*. Wood anatomically, *Shorea* is
605 identifiable in five essentially distinct groups, the white merantis, the yellow merantis,
606 the light red merantis, the dark red merantis, and the balau group. Common names for
607 these groups notwithstanding, a wood of the balau group would be considered
608 consistent with a general product claim of meranti, as both are still *Shorea*. If the claim
609 were a specific meranti (e.g. yellow meranti) then an identification of any of the other
610 merantis would be inconsistent.

611 The specimens from this product were identified as: *Albizia cf. falcataria* face
612 and back, core veneer *cf. Swietenia sp.*, *Mangifera sp.*, *Durio sp.*, and
613 *Enterolobium cf. contortisiliquium*. This is not consistent with the species claim,
614 as the latter three woods were not claimed.

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WWF-WA51 Mahogany veneers over mahogany solids furniture:

Mahogany is presumed to be a species of *Swietenia*, unless the name is preceded by some other modifier (e.g. African mahogany, which is presumed to be *Khaya*, or Philippine mahogany, which is presumed to be *Shorea*.) All three accepted species of *Swietenia* are CITES Appendix II species, meaning that any product made from *Swietenia* should reasonably be traceable back to a valid CITES export/import permit. The presence of CITES-controlled species in either Appendix II or Appendix III in a wood product should probably be considered at least a yellow flag. Any CITES Appendix I wood is fully prohibited from trade and is an automatic red flag.

The specimens from this product were identified as: *Swietenia* sp., probably *Khaya* sp., and *Swietenia* cf. *mahagoni* - possibly plantation-grown. These are consistent with the species claim because the 'probable' designation for *Khaya* is not strong enough to assert misrepresentation, and if it were not *Khaya* it would be identified as *Swietenia* based on its microscopic structure.

WWF-WA52 Table with solid Brazilian cherry wood legs, top cherry veneer over MDF:

Brazilian cherry is presumed to be any of the species of *Hymenaea*.

The specimens from this product were identified as: a species in the Lecythidaceae, probably a species of *Cariniana*. This is not consistent with the species claim, nor are *Hymenaea* and *Cariniana* confusable.

WWF-WA53 Balau outdoor furniture:

Balau is presumed to be a species of *Shorea*, specifically a high-density species belonging to the identifiable 'balau group'.

The specimens from this product were identified as: *Entandrophragma* sp. This is not consistent with the species claim, and would indicate African origin of the timber rather than southeast Asia.

WWF-WA54 Teak furniture item:

Teak (without any modifiers) is presumed to be *Tectona grandis*. Teak occurs natively in southeast Asia, especially Myanmar, but is grown in plantation across much of the tropical world. Growth rate can be used to make broad inferences about the likelihood of plantation origin of teak.

The specimens from this product were identified as: *Tectona grandis*. This is consistent with the species claim.

WWF-WA55 Solid meranti wood and veneer furniture:

Meranti is presumed to refer to species of *Shorea*. Wood anatomically, *Shorea* is identifiable in five essentially distinct groups, the white merantis, the yellow merantis, the light red merantis, the dark red merantis, and the balau group. Common names for these groups notwithstanding, a wood of the balau group would be considered consistent with a general product claim of meranti, as both are still *Shorea*. If the claim

658 were a specific meranti (e.g. yellow meranti) then an identification of any of the other
659 merantis would be inconsistent.

660 The specimens from this product were identified as: *Balfourodendron* sp. This is
661 not consistent with the species claim, and would indicate a South American
662 rather than southeast Asian origin of the timber.

663

664 WWF-WA56 Shorea outdoor furniture:

665 Shorea is presumed to be species of *Shorea*. This would be a more precise synonym for
666 meranti.

667 The specimens from this product were identified as: a species in the family
668 Anacardiaceae, but unable to narrow it down further. This is not consistent with
669 the species claim, despite the vague identification of the unknown – *Shorea* is a
670 member of the Dipterocarpaceae, not the Anacardiaceae.

671

672 WWF-WA57 Iroko mirror:

673 Iroko is presumed to refer to one of two species of *Milicia*, which is the current scientific
674 name for the genus formerly known as *Chlorophora*, which was once in turn known as
675 *Maclura*. The two species are *Milicia excelsa* and *Milicia regia*, and they are not
676 separable by wood anatomy.

677 The specimens from this product were identified as: *Milicia* sp.. This is
678 consistent with the species claim.

679

680

681 WWF-WA58 Counter Stool - "solid wood construction" and "grooved American Oak seat":

682 Oak is presumed to be a species of *Quercus*. It is not possible by wood anatomy to
683 determine the origin of oak. Wood anatomy recognizes three groups of species within
684 *Quercus*, the red oak group, the white oak group, and the live oak group.

685 The specimens from this product were identified as: *Hevea* cf. *brasiliensis*. This is
686 not consistent with the species claim, as *Hevea* and *Quercus* are not confusable.

687

688 WWF-WA59 Spanish cedar-lined humidior:

689 Spanish cedar is presumed to be a species of *Cedrela*, most commonly assumed to be
690 *Cedrela odorata*. *C. odorata*, *C. fissilis*, and *C. lilloi* are CITES Appendix III woods,
691 meaning that any product made from one of these three species of *Cedrela* should
692 reasonably be traceable back to a valid CITES export/import permit. The presence of
693 CITES-controlled species in either Appendix II or Appendix III in a wood product should
694 probably be considered at least a yellow flag. Any CITES Appendix I wood is fully
695 prohibited from trade and is an automatic red flag.

696 The specimens from this product were identified as: very probably *Tectona* sp.
697 veneer quite thin, possibly *Carapa* sp., and *Canarium schweinfurthii* or
698 *Aucoumea klaineana*. Upon further consideration and revisiting the slides and
699 specimens, the features that support an identification of *Tectona* are also
700 consistent with a slightly odd *Cedrela*. As noted in the full data, the identification
701 of *Carapa* is tentative, and the features in such a thin veneer are consistent with

702 a somewhat atypical but wholly plausible *Cedrela*. This renders this claim
703 provisionally consistent.

704

705 WWF-WA60 Sheesham wood tray:

706 Sheesham (more commonly in the technical literature as shisham) is understood to be
707 one of two species of *Dalbergia*, either *Dalbergia sissoo* or *Dalbergia latifolia*. In the
708 latter case, shisham would usually only be applied to *D. latifolia* of Indian or near-India
709 origin, not from this species in southeast Asia. More commonly, shisham is considered
710 more specific of *D. sissoo*. All species of *Dalbergia* are now CITES Appendix II species,
711 meaning that any product made from *Dalbergia* should reasonably be traceable back to
712 a valid CITES export/import permit. The presence of CITES-controlled species in either
713 Appendix II or Appendix III in a wood product should probably be considered at least a
714 yellow flag. Any CITES Appendix I wood is fully prohibited from trade and is an
715 automatic red flag.

716 The specimens from this product were identified as: *Dalbergia cf. latifolia*. This
717 is consistent with the species claim, or at the least is not inconsistent with the
718 claim, as *Dalbergia latifolia* also grows in southeast Asia, but there is not
719 referred to as shisham.

720

721 WWF-WA61 Acacia chair:

722 Acacia is the common name for the genus *Acacia* (as with *Boa constrictor* or
723 *Tyrannosaurus rex*). It is worth noting that most authors and texts are using the old
724 definition of *Acacia*, which is quite distinct from the modern definition of the genus
725 which is now restricted to predominantly to species from Australia. The iconic *Acacia* of
726 the African savanna are now relegated to the genus *Senegalia*, other species to
727 *Vachellia*, and the former *Acacia* of the new world are mostly in the genera *Mariosousa*
728 and *Acaciella*. In this report, we use the concept of *Acacia sensu lato*. This usage should
729 provide the most generous interpretation of a given product claim with the greatest
730 benefit of the doubt provided to the company. Additionally, the level of botanical
731 confusion surrounding this issue is high, even for botanists, so it is plausible that a
732 responsible effort to engage in due diligence surrounding importing “*Acacia*” that is
733 actually *Vachellia* could result in unintentional and nearly unavoidable
734 ‘misrepresentation’. Using the former, broader definition of *Acacia* will minimize this
735 problem.

736 The specimens from this product were identified as: *Acacia cf. mangium*. This is
737 consistent with the species claim.

738

739 WWF-WA62 Ash veneer and Asian hardwoods furniture item:

740 Ash is presumed to be a species of *Fraxinus*.

741 Asian hardwoods would be any hardwood consistent with an Asian origin (e.g.
742 rubberwood could be considered an Asian hardwood despite being of South American
743 origin, as it is grown in plantations in Asia for natural rubber production and almost
744 exclusively enters the forest products market via the decommissioning of Asian rubber
745 plantation trees).

746 The specimens from this product were identified as: *Fraxinus* sp., and *Hevea* cf.
747 *brasiliensis*. This is consistent with the species claim, as noted above regarding
748 the likely origin of *Hevea* wood products.

749

750 WWF-WA63 Oak hardwoods and birch veneer furniture item:

751 Oak is presumed to be a species of *Quercus*. Wood anatomy recognizes three groups of
752 species within *Quercus*, the red oak group, the white oak group, and the live oak group.
753 Birch is presumed to be a species of *Betula*.

754 The specimens from this product were identified as: paper. These specimens
755 were not wood. This is not consistent with the species claim.

756

757 WWF-WA64 Zebra wood veneer over Indonesian mahogany solids furniture item:

758 Zebra wood is presumed to be *Microberlinia brazzavillensis*.

759 Mahogany is presumed to be a species of *Swietenia*, unless the name is preceded by
760 some other modifier (e.g. African mahogany, which is presumed to be *Khaya*, or
761 Philippine mahogany, which is presumed to be *Shorea*.) All three accepted species of
762 *Swietenia* are CITES Appendix II species, meaning that any product made from *Swietenia*
763 should reasonably be traceable back to a valid CITES export/import permit. The
764 presence of CITES-controlled species in either Appendix II or Appendix III in a wood
765 product should probably be considered at least a yellow flag. Any CITES Appendix I
766 wood is fully prohibited from trade and is an automatic red flag.

767 The specimens from this product were identified as: *Swietenia* sp., and
768 *Microberlinia* cf. *brazzavillensis* and thus consistent with the species claim, as
769 there are known plantation of *Swietenia* in Indonesia.

770

771 WWF-WA65 Solid sheesham wood with MDF back furniture item:

772 Sheesham (more commonly in the technical literature as shisham) is understood to be
773 one of two species of *Dalbergia*, either *Dalbergia sissoo* or *Dalbergia latifolia*. In the
774 latter case, shisham would usually only be applied to *D. latifolia* of Indian or near-India
775 origin, not from this species in southeast Asia. More commonly, shisham is considered
776 more specific of *D. sissoo*. All species of *Dalbergia* are now CITES Appendix II species,
777 meaning that any product made from *Dalbergia* should reasonably be traceable back to
778 a valid CITES export/import permit. The presence of CITES-controlled species in either
779 Appendix II or Appendix III in a wood product should probably be considered at least a
780 yellow flag. Any CITES Appendix I wood is fully prohibited from trade and is an
781 automatic red flag.

782 The specimens from this product were identified as: *Dalbergia* cf. *latifolia* and
783 *Acacia* sp. The presence of *Acacia* is not consistent with the species claim.

784

785 WWF-WA66 Solid oak with an oak veneer cord panel phone charging station:

786 Oak is presumed to be a species of *Quercus*. Wood anatomy recognizes three groups of
787 species within *Quercus*, the red oak group, the white oak group, and the live oak group.

788 The specimens from this product were identified as: a species in the white oak
789 group (*Quercus*). This is consistent with the species claim.

790

791 WWF-WA67 Solid rosewood handle outdoor cooking implement:

792 Rosewood is presumed to refer to any species of *Dalbergia*, unless the name is preceded
793 by some other modifier (e.g. tiete rosewood, which is presumed to be *Guibourtia*
794 *chodatiana*). All species of *Dalbergia* are now CITES Appendix II species, meaning that
795 any product made from *Dalbergia* should reasonably be traceable back to a valid CITES
796 export/import permit. The presence of CITES-controlled species in either Appendix II or
797 Appendix III in a wood product should probably be considered at least a yellow flag. Any
798 CITES Appendix I wood is fully prohibited from trade and is an automatic red flag.

799 The specimens from this product were identified as: *Lithocarpus* sp. This is not
800 consistent with the species claim, as *Lithocarpus* is not confusable with
801 *Dalbergia*.

802

803 WWF-WA68 Mahogany serving item:

804 Mahogany is presumed to be a species of *Swietenia*, unless the name is preceded by
805 some other modifier (e.g. African mahogany, which is presumed to be *Khaya*, or
806 Philippine mahogany, which is presumed to be *Shorea*.) All three accepted species of
807 *Swietenia* are CITES Appendix II species, meaning that any product made from *Swietenia*
808 should reasonably be traceable back to a valid CITES export/import permit. The
809 presence of CITES-controlled species in either Appendix II or Appendix III in a wood
810 product should probably be considered at least a yellow flag. Any CITES Appendix I
811 wood is fully prohibited from trade and is an automatic red flag.

812 The specimens from this product were identified as: *Swietenia* sp. This is
813 consistent with the species claim.

814

815 WWF-WA69 Oak frame bulletin board:

816 Oak is presumed to be a species of *Quercus*. Wood anatomy recognizes three groups of
817 species within *Quercus*, the red oak group, the white oak group, and the live oak group.
818 Cork oak (*Quercus suber*) cannot readily be separated from other members of the white
819 oak group.

820 The specimens from this product were identified as: paper glued to MDF – not
821 wood. This is not consistent with the species claim.

822

823 WWF-WA70 Cumaru flooring product:

824 Cumaru is understood to be species of *Dipteryx*, especially those species from Brazil. A
825 Central American species in this genus is CITES-controlled; separation of the CITES from
826 the non-CITES species cannot be achieved by wood anatomy alone, and depends in part
827 on information about the origin of the wood. That said, very little Central American
828 *Dipteryx* is known to enter the U.S. market, whereas imports of this genus from Brazil
829 are common.

830 The specimens from this product were identified as: *Eucalyptus* sp. This is not
831 consistent with the species claim. Most species of *Eucalyptus*, especially those
832 grown in plantations in Brazil where cumaru would have come from, do not have
833 properties to compete with cumaru as a stair nose.

834

835 WWF-WA71 Spanish cedar board:

836 Spanish cedar is presumed to be a species of *Cedrela*, most commonly assumed to be
837 *Cedrela odorata*. *C. odorata*, *C. fissilis*, and *C. lilloi* are CITES Appendix III woods,
838 meaning that any product made from one of these three species of *Cedrela* should
839 reasonably be traceable back to a valid CITES export/import permit. The presence of
840 CITES-controlled species in either Appendix II or Appendix III in a wood product should
841 probably be considered at least a yellow flag. Any CITES Appendix I wood is fully
842 prohibited from trade and is an automatic red flag.

843 The specimens from this product were identified as: *Cedrela* sp. This is
844 consistent with the species claim, but may well be a CITES violation.

845

846 WWF-WA72 Mahogany wood and okoume veneer furniture item:

847 Mahogany is presumed to be a species of *Swietenia*, unless the name is preceded by
848 some other modifier (e.g. African mahogany, which is presumed to be *Khaya*, or
849 Philippine mahogany, which is presumed to be *Shorea*.) All three accepted species of
850 *Swietenia* are CITES Appendix II species, meaning that any product made from *Swietenia*
851 should reasonably be traceable back to a valid CITES export/import permit. The
852 presence of CITES-controlled species in either Appendix II or Appendix III in a wood
853 product should probably be considered at least a yellow flag. Any CITES Appendix I
854 wood is fully prohibited from trade and is an automatic red flag.

855 Okoume is presumed to be *Aucoumea klaineana*. This is the only species in the genus,
856 but the genus can be confused with other genera in the family.

857 The specimens from this product were identified as: *Swietenia* sp.,
858 *Canarium/Daryodes* or *Aucoumea klaineana*, and *Albizia* cf. *falcataria*. The
859 presence of this latter wood is not consistent with the species claim. *Albizia*
860 *falcataria* is a common shade and nitrogen-fixing species in coffee plantations
861 and is co-planted as an N-fixer in *Eucalyptus* so the presence of this wood may
862 indicate the harvest of over-large or otherwise decommissioned trees in a
863 plantation.

864

865 WWF-WA73 Cumaru flooring product:

866 Cumaru is understood to be species of *Dipteryx*, especially those species from Brazil. A
867 Central American species in this genus is CITES-controlled; separation of the CITES from
868 the non-CITES species cannot be achieved by wood anatomy alone, and depends in part
869 on information about the origin of the wood. That said, very little Central American
870 *Dipteryx* is known to enter the U.S. market, whereas imports of this genus from Brazil
871 are common.

872 The specimens from this product were identified as: *Diplotropis* sp., and
873 *Eucalyptus* sp. Neither of these woods are consistent with the species claim, nor
874 are they confusable with *Dipteryx*.

875

876 **Reference:**

877 Miller, R.B. 1976. Wood anatomy and identification of species of *Juglans*. *Botanical Gazette* 137: 368-377.