

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES  
OF WILD FAUNA AND FLORA  
Amendments to Appendices I and II of CITES

Eleventh Meeting of the Conference of the Parties  
Nairobi (Kenya), April 10-20, 2000

A. PROPOSAL

Inclusion of all species in the genus *Poecilotheria* in Appendix II. *Poecilotheria* spp. are arboreal tarantula spiders that occur in the eastern hemisphere.

B. PROPONENT

Sri Lanka and the United States of America.

C. SUPPORTING STATEMENT

1. Taxonomy

1.1 Class: Arachnida

1.2 Order: Araneae

1.3 Family: Theraphosidae

1.4 Genus and species: *Poecilotheria* Simon, 1885 (synonym: *Scurria* C.L. Koch 1851)  
*Poecilotheria fasciata* (Latreille, 1804), central Sri Lanka  
*Poecilotheria formosa* Pocock, 1899, southern India  
*Poecilotheria hillyardi* from the region of Trivandrum, southern India  
(expected publication and validation in 2000 by P. Kirk)  
*Poecilotheria metallica* Pocock, 1899, southwestern India  
*Poecilotheria miranda* Pocock, 1900, northeastern India  
*Poecilotheria ornata* Pocock, 1899, southern Sri Lanka  
*Poecilotheria pedersenii* from the region of Yala, southeastern Sri Lanka  
(expected publication and validation in 2000 by P. Kirk)  
*Poecilotheria regalis* Pocock, 1899, southwestern India  
*Poecilotheria rufilata* Pocock, 1899, southern India  
*Poecilotheria smithi* Kirk, 1996, southcentral Sri Lanka  
*Poecilotheria striata* Pocock, 1895, southern India  
*Poecilotheria subfusca* Pocock, 1895, southcentral Sri Lanka  
*Poecilotheria uniformis* Strand, 1913, Sri Lanka

1.5 Scientific synonyms:

<i>P. fasciata</i>	<i>Mygale fasciata</i> Latreille, 1804
	<i>Avicularia fasciata</i> Lamarck, 1818
	<i>Theraphosa fasciata</i> Gistel, 1848
	<i>Scurria fasciata</i> C.L. Koch, 1851
	<i>Lasiadora fasciata</i> Simon, 1864
<i>P. formosa</i>	none
<i>P. hillyard</i>	none

<i>P. metallica</i>	none
<i>P. miranda</i>	none
<i>P. ornata</i>	none
<i>P. pedersenii</i>	none
<i>P. regalis</i>	none
<i>P. rufilata</i>	none
<i>P. smithi</i>	<i>Poecilotheria bara</i> Chamberlin, 1917 <i>Poecilotheria pococki</i> Charpentier, 1996.
<i>P. striata</i>	<i>Poecilotheria vittata</i> Pocock, 1895
<i>P. subfusca</i>	<i>Scurria fasciata</i> Ausserer, 1871
<i>P. uniformis</i>	none

#### 1.6 Common names:

English:

<i>P. fasciata</i>	Sri Lankan ornamental tarantula
<i>P. formosa</i>	Salem ornamental tarantula
<i>P. hillyardi</i>	none
<i>P. metallica</i>	Gooty ornamental tarantula
<i>P. miranda</i>	none
<i>P. ornata</i>	Fringed ornamental tarantula
<i>P. pedersenii</i>	none
<i>P. regalis</i>	Indian ornamental tarantula
<i>P. rufilata</i>	Redslate ornamental tarantula
<i>P. smithi</i>	none
<i>P. striata</i>	Mysore ornamental tarantula
<i>P. subfusca</i>	Ivory ornamental tarantula
<i>P. uniformis</i>	none

French: none

Spanish: none

#### 1.7 Code numbers:

## 2. Biological Parameters

2.1 Distribution: *Poecilotheria* spp. are restricted primarily to either xeric or mesic montane forests of southern and central Sri Lanka and of southern and northeastern India. Comprehensive geographical range studies have not been conducted for any of the *Poecilotheria* spp. Specific locality data are available only from 'type' specimens and those collected in the field in recent years.

2.2 Habitat availability: *Poecilotheria* spp. live primarily in silken retreats under the bark or in natural cavities of dead trees, sometimes in natural cavities of living trees (Charpentier 1996, Kirk 1996). Dead trees are a prime source of domestic firewood and are indiscriminately taken throughout India and Sri Lanka as a cheap fuel. Wood is used in an estimated 50 % of all domestic fires in India and Sri Lanka. It has been estimated that between 1972 and 1983, India lost 6.8 million hectares (ha) of forest (Kushwaha and Hildebrandt 1995). India is estimated to have lost 5,482 sq. km. of forest cover between 1995 and 1998-99, with major losses in the States of Andhra Pradesh and Madhya Pradesh (Government of India, India Ministry of Environment and Forests, Annual Report 1998-99). Today, it is estimated that less than twenty percent of India's natural forest remains, while the percentage of Sri Lanka's remaining natural forest is a little higher. In 1989, approximately 24 % of the land area of Sri Lanka was estimated to be forested (Baldwin 1991). Other estimates place both India's and

Sri Lanka's remaining natural forests as low as ten to thirteen percent. Of those native forests which do remain, they are fragmented and themselves continually being encroached upon (Israel *et al.* 1993, Mountfort 1991, Pye-Smith 1992).

- 2.3 Population status (and reproductive biology): The status of wild populations of *Poecilotheria* spp. is unknown, because no scientific field studies have been conducted on any of the species. All known biological data about *Poecilotheria* spp. have been gained from captive keeping and rearing. All *Poecilotheria* spp. have short life spans (12-15 months for male maturation; 14-18 months for female maturation with an average postadult female age of 60-85 months), and high mortality rates prior to reaching maturity. *Poecilotheria* spp. females also have low reproductive rates, producing an average of only 100 eggs per yearly eggsac (R. West, pers. comm. with Office of Scientific Authority (OSA), U.S. Fish and Wildlife Service (USFWS), 1998). In contrast, females of *Brachypelma* spp. (western hemisphere tarantulas) are long-lived, and can produce 1,000 eggs in a yearly eggsac.
- 2.4 Population trends: Unpublished field studies conducted by Kirk, indicated that the mesic Sri Lankan *Poecilotheria* spp. do not do well near human habitation nor in reforested areas (P. Kirk, pers. comm., 1999). Unpublished field studies conducted by Smith, in 1986, indicated population numbers of the more xeric Sri Lankan species, *P. fasciata*, actually increased in reforested areas of coconut plantations. Smith found that when weevils invaded coconut trees, woodpecker birds made holes in the trees to extract the weevils and *P. fasciata* used the holes as excellent retreats. Smith further observed that the xeric *P. fasciata* utilized human buildings (even the underside of a table) for building silken retreats, unlike the mesic *Poecilotheria* spp. (Smith, pers. comm., 1999). Charpentier observed that some southern Indian *Poecilotheria* spp. do not adapt to areas reforested with coconut plantations (Charpentier 1996). Further, Charpentier predicts that with present forestry and agricultural practices, combined with the human and livestock expansion into these natural areas, that *Poecilotheria* spp. will become extinct by the year 2005 (Charpentier 1996).
- 2.5 Geographic trends: Two *Poecilotheria* spp. are found in more xeric montane forests; *P. fasciata* in the southcentral region of Kandy, Sri Lanka, and *P. regalis* in the southwestern region of the Nilgiri Hills, India. All other *Poecilotheria* spp. occur in the mesic montane forests of southern and central Sri Lanka and southern and northeastern India. Indian and Sri Lankan natural forests are at serious risk of being lost to human encroachment and agricultural development.
- 2.6 Role of the species in its ecosystem: *Poecilotheria* spp. are large spiders that primarily feed on insects, many of which are injurious to crops and trees. Their specific economic and ecological importance within the ecosystem is unknown.
- 2.7 Threats: Habitat loss, high demand for the commercial pet trade and, to a lesser degree, pesticides entering their food source, threaten the continued existence of all *Poecilotheria* spp. Forestry practices, agricultural development, expanding livestock and human encroachment, and a domestic need for firewood, are resulting in a decline of the amount of forested habitat in both India and Sri Lanka (see Section 2.2 Habitat availability).

### 3. Utilization and Trade

3.1 National utilization: Unknown.

3.2 International trade: Both India or Sri Lanka permit collection and export of *Poecilotheria* spp. for scientific purposes. However, the numbers collected and exported for scientific

purposes is unknown. Sri Lanka prohibits the commercial collecting and exportation of all *Poecilotheia* spp., but these species are not specifically protected under Indian law (A. Kumar, Wildlife Protection Society of India (WPSI), *in litt.* to OSA, USFWS, November 1999 and S. Molur, Zoo Outreach Organization, India, *in litt.* to OSA, USFWS, November 1999). Thus, they can be collected commercially and exported legally from India.

Declared imports and exports of *Poecilotheia* spp. for the United States have been collected and tabulated by the U.S. Fish and Wildlife Service Division of Law Enforcement for the years 1995 through 1999 (data for 1999 are incomplete). Tables 1 and 2 outline this information for four species of *Poecilotheia* and for individuals identified to genus only.

Table 1. Declared imports of *Poecilotheia* spp. into the United States, 1995-99.

No. of Live Specimens Imported to U.S.A., 1995-1999	1995	1996	1997	1998	1999
<i>Poecilotheia fasciata</i>	0	1	90	140	125
<i>Poecilotheia ornata</i>	0	202	529	80	0
<i>Poecilotheia regalis</i>	118	55	90	277	20
<i>Poecilotheia rufilata</i>	0	0	0	30	50
<i>Poecilotheia</i> spp.	59	52	503	221	52
<b>TOTAL</b>	<b>177</b>	<b>310</b>	<b>1,212</b>	<b>748</b>	<b>247</b>

Table 2. Declared exports of *Poecilotheia* spp. from the United States, 1995-99.

No. of Live Specimens Exported from U.S.A., 1995-1999	1995	1996	1997	1998	1999
<i>Poecilotheia fasciata</i>	12	10	2	76	28
<i>Poecilotheia ornata</i>	0	25	6	17	6
<i>Poecilotheia regalis</i>	13	0	8	46	0
<i>Poecilotheia rufilata</i>	0	0	0	20	34
<i>Poecilotheia</i> spp.	41	11	6	14	17
<b>TOTAL</b>	<b>66</b>	<b>46</b>	<b>22</b>	<b>173</b>	<b>85</b>

Over the 5-year period, 2,694 live specimens of *Poecilotheia* spp. were declared to have been imported into the United States, and 392 live specimens were declared to have been exported from the United States. The actual number of captive-bred or wild-collected *Poecilotheia* spp. imported into, or exported out of the United States or other jurisdictions (e.g., Canada, the European Union) is unknown, as many imports and exports likely are not reported.

- 3.3 Illegal trade: Although Sri Lanka prohibits the commercial collecting and exportation of all *Poecilotheria* spp., India does not. Thus, Sri Lankan species (*P. fasciata*, *P. ornata*, *P. pederseni*, *P. smithi*, *P. subfusca*, *P. uniformis*) in trade are technically illegal, while those originating from India are technically legal. Commercial pet trade companies continually advertise both 'captive bred' and wild-collected specimens of *Poecilotheria* spp on price lists. Again, it would appear that Sri Lankan species offered by these companies are illegal. Examples of commercial pet trade dealer prices are readily available on the Internet. Depending on the species, prices for captive bred specimens range from US \$20.00 each for spiderlings to US \$250.00 each for sub-adult and adult specimens. Wild-collected adults command even higher prices on the pet trade market. With such prices for a single live *Poecilotheria* spp., the incentive to collect and sell them is high.
- 3.4 Actual and potential trade impacts: The life history (short life spans, low reproductive rates) of *Poecilotheria* spp. make them particularly vulnerable to commercial harvest. Because their forested habitats are diminishing rapidly, the illegal capture and export of these tarantulas may increase their risk of extinction unless protective measures are implemented.
- 3.5 Captive breeding or artificial propagation for commercial purposes: All of the known species of *Poecilotheria* spp. have been successfully bred in captivity (Huff, Kirk, Verdez, pers. comm., 1999), however, not in numbers to keep up with the demand of the commercial pet trade. Additionally, because the gene pool of captive-reared adults is restricted, international exchange of live breeding adults is risky, and mortality rates can be high in specimens reaching maturity, it is likely that more wild-collected specimens will be required for the commercial pet trade.

#### 4. Conservation and Management

##### 4.1 Legal status

4.1.1 National: Sri Lanka prohibits the commercial collecting and export of all *Poecilotheria* spp. under provisions of The Fauna and Flora Protection (Amendment) Act, No. 49 of 1993, part of the Fauna and Flora Protection Ordinance of Sri Lanka. *Poecilotheria* spp. are not listed under the Indian Wildlife Protection Act (amended 1991); they are not included in the current draft (1998-99) of the amendment to the Act, either (S. Molar, Zoo Outreach Organization, India, *in litt.* to OSA, USFWS, November 1999).

4.1.2 International: None; no species in this genus are listed in the CITES Appendices.

##### 4.2 Species management

4.2.1 Population monitoring: There are no known population studies being conducted in the field on any of the *Poecilotheria* spp. at this time. Indian authorities have apparently issued instructions to initiate a study of domestic utilization and trade of *Poecilotheria* spp. (A. Kumar, WPSI, *in litt.* to OSA, USFWS, November 1999)

4.2.2 Habitat conservation: The Forest Conservation Act of 1980 was passed in India. Between 1950 and 1980, the total area of reforestation has been 3,550,000 hectares, however, this reforestation has been primarily trees of commercial value and planted in areas to conserve soil and moisture (Mountfort 1991). Aside from Smith's 1986

observation that a mesic population of *P. fasciata* did better in a Sri Lankan coconut plantation, both Kirk and Charpentier (1996) observed that the majority of *Poecilotheria* spp. populations did not do well in reforested xeric habitat. More field studies would need to be done on *Poecilotheria* spp. before any firm conclusions could be made on whether or not they adapt to reforestation.

4.2.3 Management measures: There are no known government-sponsored management measures in place for *Poecilotheria* spp. in either India or Sri Lanka. And, although there are reported to be at least 900 nongovernmental conservation organizations working in India and Sri Lanka (Mountfort 1991), none are known to have specific conservation programs for any of the *Poecilotheria* spp.

#### 4.3 Control measures

4.3.1 International trade: None known.

4.3.2 Domestic measures: None, except the national laws cited above.

### 5. Information on Similar Species

5.1 The impact of listing *Brachypelma* spp. on CITES in 1994: All *Brachypelma* spp. (western hemisphere tarantulas) were listed in CITES Appendix II in November 1994. Indiscriminate collection and lack of monitoring to control overharvest may have destroyed small aggregations of these species (IUCN 1993). Inclusion of these species in CITES has resulted in an increased shift from the commercial trade and purchase of *Brachypelma* spp. to both the *Poecilotheria* spp. and some of the large and colorful protected tarantula spiders from Brazil (R. West, pers. comm. with OSA, USFWS, 1999). Captive breeding of *Poecilotheria* spp. is inadequate (i.e., too few are produced) to keep up with increasing demand for the commercial pet trade presently occurring in Canada, United States of America, United Kingdom, Germany, Holland, Belgium, Switzerland, Sweden, Norway, Hong Kong, Greece, Italy, France and Japan (R. West, pers. comm. with OSA, USFWS, 1999).

5.2 The impact of listing *Poecilotheria* spp. on CITES: The commercial pet trade primarily targets those tarantula species which grow large, are colorful, and are either difficult to obtain or are from countries where their non-scientific collection and export are prohibited, but the resources to protect them are lacking. There are concerns that the listing of all *Poecilotheria* spp. on CITES will shift the commercial pet trade demand to another tarantula species.

### 6. Other Comments

The Government of India was consulted regarding this proposal and indicated its support for listing all *Poecilotheria* spp. on Appendix II. Such a listing would allow India to prohibit commercial collection for export under its current export ban.

### 7. Additional Remarks

Andrew Smith, Research Associate of the British Museum of Natural History and Fellow of the London Zoo states that London Zoo support the protection of all *Poecilotheria* spp. (A. Smith, pers. comm., 1998). Peter Kirk, Editor, British Tarantula Society, London, also supports the proposal to include all *Poecilotheria* spp. on CITES (P. Kirk, pers. comm., 1998).

*Poecilotheria* spp. qualify for inclusion Appendix II of CITES based on criteria in Annex 2a of Resolution Conf. 9.24, and the following points:

- (1) since the placement of *Brachypelma* spp. on Appendix II of CITES in 1994, the commercial pet trade has shifted to the colorful and ornate *Poecilotheria* spp.;
- (2) the reproductive potential of *Poecilotheria* spp. in captivity is low and unable to keep up with the demand for the commercial pet trade;
- (3) the life history (short life spans, low reproductive rates) of *Poecilotheria* spp. make them vulnerable to commercial harvest; and
- (4) the range of *Poecilotheria* spp. is restricted to the rapidly diminishing native forests of southern and central Sri Lanka and southern and northeastern India.

Because *Poecilotheria* spp. are in high demand and are vulnerable to commercial harvest, it can be projected that the harvesting of specimens from the wild for international trade may have a detrimental impact on the various species by exceeding, over an extended period, the level that can be continued in perpetuity (Criterion B.i.), and by reducing population levels to a point at which survival of the various species would be threatened by other factors, primarily deforestation (Criterion B.ii.).

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