

Inclusion of swallowtail butterflies *Papilio aristophontes*, *P. nireus* and *P. sosia* in Appendix II. Proponent: Germany (on behalf of Member States of the European Community).

Summary: *Papilio aristophontes*, sometimes considered a subspecies of the widespread African *Papilio nireus*, is endemic to Comoros, with populations confirmed on Grand Comore and thought to exist on Moheli and Anjouan. There are insufficient data to establish reliable population trends other than those inferred from changes in habitat availability, which has undergone a significant decline through conversion to agriculture, restricting remaining habitat to steep slopes and high altitudes. Data from trade fairs in Europe suggest that limited international trade in the species occurs. There is no evidence of a national market for the species, alive or dead. *P. aristophontes* is classified as Endangered by IUCN and is fully protected in the Comoros, so that all export is banned. The species is proposed for inclusion in Appendix II in accordance with Article II (2a), while *P. nireus* and *P. sosia* are proposed for listing due to reasons of similar appearance in accordance with Article II (2b). *P. nireus* occurs in forests throughout southern and tropical Africa and is considered very common. *P. sosia* is recorded from 17 countries in west and central Africa and is said to be less common than *P. nireus* but still fairly common. Approximately 20 000 *P. nireus* pupae are produced in captivity each year, of which 6 000 are confirmed to be traded internationally.

Analysis: From the available data, *Papilio aristophontes* has a limited and apparently contracting range. The species is, or has been, in international trade, although it seems that this trade is limited. There is no information on the impact of collection for trade on wild populations although it may be inferred that such impact is unlikely to be great. It is not clear that strict regulation of international trade will affect its status. The species is banned from export from its only range State. Inclusion of *P. nireus* and *P. sosia* in Appendix II is based on their similarity of appearance to *P. aristophontes*. The inclusion of these two species in Appendix II may cause significant enforcement problems as both are reportedly similar to nine other species as adults and 13 species as pupae, none of which is currently listed or proposed for listing in the Appendices. Under Resolution Conf. 9.24, because of its very limited and apparently contracting range, and the fact that there is international demand for specimens, it is possible that *P. aristophontes* meets the criteria for inclusion in Appendix I.

Supporting Statement (SS)	Additional information
<u>Taxonomy</u>	
<i>Papilio nireus</i> : <i>Papilio nireus aristophontes</i>	<i>P. aristophontes</i> might be regarded as a subspecies according to Ackery et al. (1995) and the leading website for swallowtail butterflies (Häuser, 2001), However, d'Abbrera et al. (1997) insist on separate status for <i>P. aristophontes</i> .
<u>Range</u>	
<i>P. aristophontes</i> : Comoro Islands <i>P. nireus</i> : sub-Saharan Africa <i>P. sosia</i> : Cameroon to Sierra Leone	<i>P. sosia</i> is recorded from at least 18 countries in west and central Africa (Collins and Morris, 1985. Ackery et al. 1995), and <i>P. nireus</i> is recorded in 17 countries (Collins and Morris, 1995).
<u>IUCN Global Category</u>	
<i>P. aristophontes</i> : EN (B1+2c)	

Supporting Statement (SS)	Additional information
Biological and trade criteria for inclusion in Appendix II	
<u>A) Trade regulation needed to prevent future inclusion in Appendix I</u>	
<p>No quantitative data for the population size of <i>P. aristophontes</i> are available. However, its limited range indicates that the species is likely to have a small wild population. The area of potential habitat had by 2000 reportedly been reduced to 8 000 hectares.</p> <p>The species is in demand for international trade as demonstrated by its appearance at European trade fairs.</p>	<p><i>P. aristophontes</i> is the second most frequently observed Papilio species found in the Comoros (TRAFFIC Europe - France, 2002).</p>
<u>B) Harvesting for international trade has, or may have, detrimental impact on population</u>	
<u>(i) exceeds sustainable yield; (ii) reduces population to potentially threatened level</u>	
<p>From September 1996 to November 1997, a total of 17 specimens of <i>P. aristophontes</i> was recorded as offered for sale at trade fairs across Europe. Although traders may exhibit at a number of fairs, different traders offered all these particular specimens for sale. A small number of specimens (two to three pairs) was available at the Frankfurt trade fair in 1999 and 2000. A local dealer had purchased 21 males and two females in Mayotte in the 1980s. Since then the number of specimens reported in trade has become much smaller.</p> <p>There is no evidence of a substantial national market for live or dead specimens.</p>	<p>A study by Schütz (2000, cited by TRAFFIC Europe – France, 2002) shows that legal international trade in the species does exist, the volume of which could be underestimated (TRAFFIC Europe - France, 2002).</p> <p>Bachirou (2002) does not believe that trade of butterflies occurs in the Comoros. However, he states that tourists may collect butterflies during their stay.</p> <p><i>P. nireus</i> is one of the most common and widespread swallowtail species in Africa (Vane-Wright, 2002). It is used in many public butterfly houses across North America and Europe, and in Kenya, South Africa and Zambia. Pupae are produced in Tanzania and Uganda, with an estimated 20 000 produced per year of which 6 000 enter international trade (Collins, 2002).</p> <p>Internet searches carried out in the United Kingdom, France, Japan and Germany found that of these three species only <i>P. nireus</i> was available for sale over the web (TRAFFIC East Asia - Japan, 2002; TRAFFIC Europe - France, 2002).</p>

Inclusion in Appendix II to improve control of other listed species

Specimens resemble other species and are difficult to distinguish, or most of taxon is already listed

P. nireus and *P. sosia* are proposed on the basis of their similarity in appearance to *P. aristophontes*.

Other information

Threats

P. aristophontes: The Comoros has become the most densely populated country in Africa. Virtually all lowland areas have been converted for agriculture, while at mid-altitude there remain only small areas of forests which, with the exception of the steepest slopes, have been underplanted. While *P. aristophontes* appears to do well in underplanted forest there is a risk that these areas may eventually be converted to agricultural land.

P. aristophontes: The forest of Grande Comore is continually being cleared and invaded by strawberry guava (*Psidium cattleianum*). These factors combined with the loss of the species' host plant (*Toddalia arabica*) are having a negative impact on the species (Lees, 2002).

Conservation, management and legislation

Ministerial Decree n° 01/31/MPE/CAB (May, 2001) (concerning the protection of wild species of fauna and

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	<p><i>flora in the Comoros) specifies that Papilio aristophontes is fully protected and not permitted to be exported (Bachirou, 2002).</i></p> <p><u>Similar species</u></p> <p><i>Males of P. desmondi, P. interjectana, P. ufipa, and possibly P. bromus and P. chrapkowskii from the mainland could also be confused with males of P. aristophontes. The female of the species is distinctive, with an olivaceous colour pattern on its upperside (Vane-Wright, 2002).</i></p> <p><i>P. sosia and P. nireus are similar as adults to nine other Papilio species. These, plus a further four Papilio species, are indistinguishable as pupae even to experts (Collins, 2002).</i></p> <p><u>Captive breeding</u></p> <p><i>It is estimated that 20 000 P. nireus pupae are produced each year in butterfly houses in Africa, Europe and North America (Collins, 2002).</i></p> <p><u>Other comments</u></p> <p><i>The CITES Management Authority of the Comoros notes that an Appendix II listing for P. aristophontes, which implies legal international trade in wild-collected specimens, appears incompatible with current Comorean legislation, which bans export of the species (Bachirou, 2002).</i></p> <p><i>Collins (2002) does not support the listing of P. nireus as look-alike species due to problems with enforcement.</i></p> <p><i>Turlin (2002) does not support the listing of the species in Appendix II, he believes the real issue to be habitat conservation and management.</i></p>

Reviewers: D. Lees, TRAFFIC East Asia – Japan, TRAFFIC Europe- France, TRAFFIC Europe - Germany, R.I. Vane-Wright.

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