

Short communication — Kurze Mitteilung — En bref

***Danaus chrysippus* (L.) in Algeria :
Possible breeding status and new sightings
(Lepidoptera, Danaidae)**

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Danaus chrysippus (L.) is widely distributed in tropical Africa and is well known for its migratory behaviour. The species is well established in Egypt and colonies are known to exist in the Canary Islands. From 1980, *D. chrysippus* managed to gain a foothold in southern Spain. From there a number of scattered colonies have been reported. It remains to be seen, however, whether permanent colonisation is possible in that country (KING, 1991 ; OWEN, 1991). In most of southern Europe, only single individuals have been reported, except for an ephemeral colony that existed in the early eighteenth century near Naples (BRETHERTON, 1984).

Following our recent observations of the Plain Tiger in Algeria (SAMRAOUI & BENYACOUB, 1991), we have again in 1991 noted the presence of *D. chrysippus* in this country. The following observations have been made (see map, Fig. 1) :

North-eastern Algeria (El-Kala) : Lac des Oiseaux 21.06.1991 (1)
El-Chatt 14.06.1991 (1)
Lac Bleu 28.05.1991 (2)

Northern Oases : Biskra 19.07.1991 (numerous)
Laghouat 26.07.1991 (numerous in copula)
Gharsaïa 28.07.1991 (numerous)
Touggourt 05.08.1991 (3)

Southern Algeria : Tamanrasset 10.10.1991 (1)

These sightings extend considerably the known distribution of *D. chrysippus* in Algeria. No migratory movement was noticed this time. Moreover, in Laghouat, several in copula pairs were observed in a palm plantation near Oued M'zi, indicating that *D. chrysippus* could be breeding in Algeria. Although no larvae have yet been found, a very abundant and widespread plant *Calotropis procera* AIT (Asclepiadaceae) (Fig. 2) could serve as host plant, at least in southern Algeria.



Fig. 1. Localities in Algeria where *Danaus chrysippus* was observed in 1990 and 1991.



Fig. 2. *Calotropis procera* Atf. Hoggar, near Tamanrasset, southern Algeria.

In the northern oases this plant could not be found and is described there as being rare (OZENDA, 1983), raising the possibility that a second host plant could be used.

D. chrysippus is polymorphic at three gene loci which determine the colour form of the butterfly. Eight sympatric colour forms (morphs) have been reported from East Africa (SMITH, 1975 ; SMITH et al, 1988). All the adults seen in 1990 and those reported above were of the form *aegyptius*, except for a single specimen of the form *alcippus* which was observed on 10th Oct. 1991 in the Hoggar, near Tamanrasset.

These observations support the idea that *D. chrysippus* can cross the formidable desert barrier and could establish itself in the central Sahara. However, they leave open the question of the origin of the probable breeding populations found in the Algerian oases, although Egypt is the most likely source (SAMRAOUI & BENYACOU, 1991). Their existence offers a plausible explanation for the origin of the colonies reported in the Canary Islands (LARSEN, 1986) and southern Spain, and could provide a stepping stone for further colonisation of southern Europe.

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References

- BRETHERTON, R. F., 1984. Monarchs on the move — *Danaus plexippus* (L.) and *D. chrysippus* (L.). *Proc. Trans. Br. ent. nat. Hist. Soc.* 17 : 65-66.
- KING, G., 1991. The Spanish whereabouts of the Monarch and Plain Tiger. *Bull. amat. Ent. Soc.* 50 : 48.
- LARSEN, T. B., 1986. Tropical butterflies of the Mediterranean. *Nota lepid.* 9 : 63-77.
- OWEN, D. F., 1991. Can *Danaus chrysippus* (L.) (Lepidoptera : Danaidae) establish itself in Europe ? *Entomologist's Gazette* 42 : 37-39.
- OZENDA, D. F., 1983. Flore du Sahara. Edit. C.N.R.S., Paris.
- SAMRAOUI, B. & BENYACOU, S., 1991. A large migration of the Plain Tiger, *Danaus chrysippus* L., through eastern Algeria (Lepidoptera : Danaidae). *Nota lepid.* 14 : 99.
- SMITH, D. A. S., 1975. Genetics of some polymorphic forms of the African butterfly *Danaus chrysippus*. *Entomologica scand.* 6 : 134-144.
- SMITH, D. A. S., SHOESMITH, E. A. & SMITH, A. G., 1988. Pupal polymorphism in the butterfly *D. chrysippus* (L.): Environmental, seasonal and genetic influences. *Biol. J. Linn. Soc.* 33 : 17-50.