

The foodplant of *Colias ladakensis*
C. and R. FELDER, 1865
(Lepidoptera : Pieridae)

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In his recent work on the systematics of the genus *Colias* F., L. A. BERGER stresses the lack of information on the early stages of these butterflies and gives a list of the species whose foodplant is known. Since *C. ladakensis* is not mentioned among them we believe it could be interesting to report some of our field observations about its behaviour discovered in summer 1983 during our first entomological trek in western Himalaya.



Fig. 1. A typical habitat of *C. ladakensis* near the Phirtse La (India, Zaskar, 4700 m) with dominant vegetation of *Caragana versicolor*.

We left Manali (India, Himachal Pradesh) on July 15th going north and we found *C. ladakensis* only after crossing the Shingo La and entering the valley of the Kurgiakh river in the Zaskar region. At first there were a few

specimens near Tanze village at about 4000 m, but their number rapidly increased approaching the Phirtse La ; finally we found a large colony of them at about 4700 m on the western side of the Pass in a place where a spiny leguminous plant with yellow flowers grew copiously as small shrubs.

We spent a full day there, July 29th, and the relationship between the butterfly and that particular plant appeared clear to us : we often watched specimens settling on it and even entering the tangle of the spiny branchlets when the sun was covered by the clouds, which explained the great number of worn specimens. At last we saw a female oviposit on the plant and found one egg among the leaflets : typically bottle-shaped and ribbed it was pale yellow just laid, but about two days later started changing its colour, becoming darker and darker until it became orange shaded. On August 7th, in the morning, we discovered that a tiny greyish larva had hatched. Unfortunately in the meantime we had reached an area lacking the above mentioned plant so we could not rear the young larva which died a few days later ; it refused to eat the leaves of some other leguminous plants.

After our return to Italy, the plant was determined as *Caragana versicolor* (WALLICH) BENTH. According to POLUNIN & STANTON it is to be found in the alpine steppe country from Afghanistan to western Nepal, Tibet and China between 3600 and 4800 m.

These observations have been checked and amplified during our second trek carried out in Ladakh in the area south of Leh in July and August 1986. Even this time we found *C. ladakensis* only in biotopes where *Caragana* was present, but it was not always *C. versicolor* : near the Ganda La the butterfly was associated with *Caragana brevifolia* KOMAROV, a species very close to the previous one and likewise typical of the alpine steppe, widespread between Kashmir and Uttar Pradesh.

The conclusions are clear : *Caragana versicolor* is obviously a foodplant of *Colias ladakensis* and it may be that *Caragana brevifolia* is also. Very likely they are the only ones : the close relationship with the butterfly, whose range falls within that of the most widespread of the two plants, supports this point of view.

We cannot conclude this note without referring to an interesting work just published in this journal concerning the butterflies of Kashmir and Ladakh. The authors, R. VIS and H. A. COENE, found *C. ladakensis* in the Nimaling valley and on the northern side of the Gomaru La, localities that we visited during our second trek. They write : "The butterfly frequents slopes overgrown with *Juniperus* (dwarf form)..." and "It is only occasionally seen outside this habitat". We think they have run into a misidentification problem, mistaking the *Caragana* shrubs for *Juniperus*. *Caragana* resembles

Juniperus in a striking way : when the yellow flowers are not present the error is quite possible.

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References

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