

RESOLUTION OF THE CONTROVERSIAL WESTERN LIMIT OF THE RANGE OF *DELIAS ACALIS* GODART (LEPIDOPTERA: PIERIDAE)

The western limit of the distribution of the Redbreast Jezebel *Delias acalis pyramus* Wallace has been the subject of some controversy. Evans (1932) gave a range of Shimla (Himachal Pradesh) to Burma (=Myanmar). Subsequent authors, including Wynter-Blyth (1957) and Lewis (1973) gave a range of Nepal to Assam, Burma, Malaysia and the Eastern Ghats of India for the species.

Wynter-Blyth (op. cit.) noted "Evans (op. cit.) gives Shimla as a locality for this butterfly, but this is not confirmed by THE FAUNA OF BRITISH INDIA nor has the author any record of its capture there. If his record is correct, it will also presumably be found in Garhwal and Kumaon."

Recently, I have seen this butterfly on five occasions in Kumaon. The first time was on November 9, 1997 in a garden in the H.M.T. Colony in Ranibagh near Haldwani at an elevation of approximately 450 m. The butterfly was attracted to poinsettia blooms (*Euphorbia pulcherrima* Willd. Ex Klotzsch) and settled for over a minute, allowing itself to be observed well. However, it was not possible to observe the *recto* surface and the diagnostic red basal area on the hindwing *recto*. It might therefore have been the Redbase Jezebel *Delias pasithoe* L., although this is unlikely.

The next sighting was in Jones Estate in the Bhimtal Valley on April 21, 1998 at an elevation of 1,500 m. A rather worn specimen was attracted to blossoms of *Bauhinia vareigata* L. By a stroke of luck, it sailed across a terrace below me, so it was possible to clearly see the red basal area on the hindwing *recto*. It was certainly *Delias acalis*.

The third sighting was 10 km north of the town of Rudrapur in the Terai, at an elevation of c.450 m on March 7, 1999. The specimen was seen flying about at tree top level in the manner typical of the genus. It crossed the road occasionally, but did not settle. Again, it might have been either *acalis* or *pasithoe*, since the *recto* surface was not visible from below.

The fourth specimen was a female that settled on a flowering buddleia bush (*Buddleia* L.) on March 9, 1999 in Jones Estate, within a hundred meters of where the second individual was sighted nearly a year before. The specimen is now in my collection. The forewing length is 43 mm and the expanse 90 mm. This is the first specimen recorded from Kumaon and is in good condition.

The fifth record was on December 1, 1999 when an individual was flying along the motor road 200 m from where the first record was sighted in Ranibagh in 1997. Since it was flying slowly, it was possible to see the diagnostic red basal patch on the hindwing *recto*.

I am quite certain that this species was not present in this area during the last 20 years and my late father did not record it either in the course of collecting and observing butterflies in the area since 1949. It is such a conspicuous butterfly that it could not have been overlooked, even by a casual collector.

Therefore, it has moved into the area recently. Three definite and two probable records within three years, where it was not recorded for over 50 years implies that the recent records are members of a breeding population rather than

mere stragglers from Nepal. The sightings follow the emergence pattern observed by Bailey (1951) in Nepal, i.e. November – December, March- April and again the following March and December. Although the monsoon brood noted by Bailey (op. cit.) has not been recorded in Kumaon so far, this is probably because of the limited period of activity of butterflies during the monsoon, as well as because I hardly travel to low elevations during that season. If one considers that this species is not a known migrant, nor for that matter is any member of the genus, the possibility of the present records being mere stragglers is unlikely. I might add that during the 1980s and early 1990s, I was on the road much more often to Haldwani and other adjoining low areas than during the later 1990s, hence the possibility of encountering these butterflies was greater in the past than during the last few years when they have actually been recorded.

According to Sevastopulo (1973), the larval hostplant is probably *Loranthus* L., of which four species occur below 1,500 m in Kumaon (Osmaston 1927).

The above observations resolve the problem of Evans' (op. cit.) record of the butterfly from Shimla. Being at the western extremity of its range, this limit is evidently flexible. The factors influencing the expansion and contraction of its range have not been understood, but in certain years, such as during 1997, 1998 and 1999, the range is extended westward. For most of the 20th century, this butterfly was unable to extend its range west of Nepal. But now, factors being conducive, it has extended its range to Kumaon and possibly even further westward along the Himalaya. The material upon which Evans (op. cit.) based his record from Shimla was evidently a part of such an expansion in range as is being witnessed at present. One or more specimens were taken at Shimla, in much the same manner as the specimens reached Jones Estate recently. Subsequently, the range contracted and no more records were forthcoming, hence the controversy.

There is also a controversy regarding the occurrence of this butterfly in the Eastern Ghats where it is said to be very rare (Wynter-Blyth, op. cit.). According to Evans (op. cit.), the subspecies *kandha* Doherty occurs in the Madras Presidency. Alan Sharman (*in litt.*), who collected and lived in the Eastern Ghats until the 1960s, failed to find it there. Other recent workers have also not found it. Perhaps the factors leading to the recent expansion of this insect's range westward along the Himalaya will also cause it to be met in the Eastern Ghats, too.

For the future, it would be best to amend the distribution of this butterfly to read "Extends its range westward along the Himalaya in certain years from Nepal to Kumaon and probably as far as Himachal Pradesh."

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