

## ON A CASE OF HYBRIDIZATION IN *DICAEUM*

(*Aves, Dicaeidae*)

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MAYR and AMADON (A review of the *Dicaeidae*, Am.Mus.Nov.1360, 1947) suggest that the Sundanese Flowerpeckers *Dicaeum cruentatum* and *Dicaeum trochileum* should be considered as members of one Species Group. According to these authors this group includes 13 geographically representative species, of which the combined area ranges throughout Indo-China and Sumatra in the West, through the Indo-Australian Archipelago, to the Solomon Islands in the East. In this range only one case of overlapping could be established, viz. in Lombok, where *D. maugei neglectum* occurs side by side with *D. trochileum stresemanni*.

A second area of overlap apparently has been overlooked by the authors. This is discussed below.

In addition to Java, Bali, and Lombok, as mentioned by MAYR and AMADON, *trochileum* also occurs in Southeastern Borneo. MAYR and AMADON do not make mention of this part of the range of *trochileum*, which is the more remarkable, since "Borneo (south)" is also included in the area of *trochileum trochileum* by CHASEN in his "Handlist" (1935, p. 267). In the Leiden Museum specimens of *trochileum* are present from the following localities in the lowlands of Southeastern Borneo: Asem-Asem River, Pelaihari, Rantau, Karau River. This Bornean series of 7 adult males and 3 adult females proved to be indistinguishable from an adequate series of Javanese birds.

*D. cruentatum nigrimentum* is represented in the Leiden Museum from several localities in the District of Western Borneo, and in the Buitenzorg Museum from Lawas River (Brunei) and Samarinda (East Borneo). Besides, *cruentatum* is recorded by MAYR (Bull.Raffles Mus. 14, 1938, p. 41) from Parit, South Borneo.

Though in Borneo apparently no definite localities are known where *trochileum* and *cruentatum* occur side by side, the Buitenzorg Museum possesses one male specimen from Samarinda, East Borneo (May 1, 1938,

P. J. BOUMA leg.), which appears to be intermediate between *trochileum* and *cruentatum*. This specimen is described below.

Whole upperparts red, as in both species, the coloration approaching the carmine red tinge of *trochileum*. Wing- and tail-feathers glossy black, as in both species, but the uppersides of the wings have the slightly more metallic blue gloss of *cruentatum*. Sides of the head and earcoverts black, as in *cruentatum*. Throat and upper breast red, as in *trochileum*, though less extended than in that species; some chin- and throat-feathers are white, as is found in several Bornean specimens of *cruentatum*. The sides of the breast show slight traces of the dark grey patches of *cruentatum*. Lower breast and abdomen mostly light grey, as in *trochileum*, but an ill-defined median line and the whole lower abdomen are white, as in *cruentatum*. Subcaudals white, as in both species. Measurements: wing 49; tail 21; tarsus 12.5; culmen from base of forehead 10.5 mm. These measurements agree with those of Bornean *cruentatum*, though the tarsus is slightly larger. The bird has also the relatively shorter and less thinly pointed bill of *cruentatum nigrimentum*. The following measurements are given for comparison:

*D. cruentatum nigrimentum.*

W. Borneo (6 ♂♂):

wing	45 - 48.5	average	46.6 mm.
tail	20.5 - 23	"	21.8 "
tarsus	11 - 11.5	"	11.2 "
culmen	10 - 11	"	10.6 "

Lawas Riv., Brunei, N. Borneo (2 ♂♂):

wing	48.7 - 50	"	49.3 mm.
tail	24 - 24.8	"	24.4 "
tarsus	11.3 - 11.7	"	11.5 "
culmen	10.4 - 10.6	"	10.5 "

Samarinda, Kutai, E. Borneo (2 ♂♂):

wing	45.3 - 47.3	"	46.3 mm.
tail	22.7 - 23.7	"	23.2 "
tarsus	11.2 - 11.4	"	11.3 "
culmen	9.4 - ?		

*D. trochileum trochileum.*

(The average measurements of 49 Javanese specimens are added between parentheses).

Borneo (7 ♂♂):

wing	50 - 55	average	52.9 mm (53.5).
tail	25.5 - 28.5	"	27.9 " (27.6).
tarsus	12.5 - 14.5	"	13.1 " (12.7).
culmen	12 - 13	"	12.2 " (12.2).

From the same locality (Samarinda) specimens of true *cruentatum nigrimentum* are present in the Buitenzorg Museum. Therefore, we think it possible that the above intermediate bird represents a hybrid between the species *trochileum* and *cruentatum*, occurring in a zone of overlap of the ranges.

The males of the two species are quite distinct. The females resemble each other much more closely. They differ, however, not only in size, in the same way as the males do, but also in the much darker coloration of the ventral parts, the more yellowish tinge of the plain dress, and the darker red, less carmine, coloration of the upper tailcoverts. Thus, hybridization seems possible, even from a pure morphological point of view.

The occurrence of hybridization in the zone of overlap of the ranges of *D. trochileum trochileum* and *D. cruentatum nigrimentum* may be considered to be a confirmation of the supposition by MAYR and AMADON (l.c.) that the species *trochileum* and *cruentatum* are geographically representative members of one Species Group, i.e. are *greges* of the same Species Complex.