there were three lines of migrants for a five hour period, it was estimated that 3500 to 4500 individuals were in the first day's flight. At best this is only a rough estimate, because the hour between 10:00 and 11:00 A. M. was not as heavy with migrants as were the hours between 11:00 A. M. and 2:00 P. M. Also after 2:00 o'clock the flight began to taper off. Rechecking on subsequent days, however, verified the comparative accuracy of the above figure.

From this movement four species of the genus *Catopsilia* were collected; namely, *C. pomona* Fabr. (The Lemon Emigrant); *C. crocale crocale* Cram. (The Common Emigrant); *C. pyranthe minna* Herbst (The Mottled Emigrant); and *C. florella gnoma* Fabr. (The African Emigrant). Males and females were collected of these four species.

Although the migration continued for six days, the migrants were never so steady as on the first "heavy" day. Several members of the Family Hesperiidae (The Skippers) and one species of the Subfamily Plebejinae (The Blues) were collected from the migrating group and sent to the American Museum of Natural History. On the first day from 11:00 A. M. until 2:00 P. M. the movement of Skippers was recorded, the estimation being 200 - 250 per hour or a total of 600 - 750 in the thrree hour period. During the first three days the Skippers and the Blues accompanied the migrating *Catopsilia;* however, their manner of flight was more varied and never in such regular lines. Occasionally small swarms of Skippers were seen, so it was difficult to estimate their number. The Blues were scattered among all the others and no count was taken. The Skippers flew even faster and higher than the *Catopsilia,* so capturing them was a real task. Even with a long-handled net I had to jump as high as possible and then swing at a flying target. So only a few were caught.

Ahwa, via Billimora, Dangs District, B.P., India

MIGRATION OF THE MONARCH BUTTERFLY DURING THE WINTER

by GEOFFREY BEALL

The present note is a brief report on migration of the Monarch butterfly, *Danaus plexippus* Linné, during the winter (December 10 through May 5) in Florida. The data are of particular importance because they substantiate the suspicion that the Monarch is constantly in migration although only at certain seasons does this migration attract popular attention because of the number of butterflies involved.

The data were sent to the writer by Mr. & Mrs. KARL HODGES, as a response to his plea for information from local naturalists in *The Lepidopterists' News,* vol. 5: 37-40. The data are an example of the valuable information that can be collected by local naturalists.

Mr. & Mrs. HODGES live at Indialantic which is on a very long island, about three-quarter miles wide off the coast of much of Florida. Between the island and the mainland is a long narrow lagoon called Indian River, of about the same width. Beyond the island is the Atlantic. They are just above latitude 28° or about half way down the state.

They made observations every day and on certain days saw numbers of Monarchs, as follows:

Date	Number	Movement	Wind	Date	Number	Movement	Wind
1951				1952			
Dec. 10	3	S	Calm	Mar. 12	1	N	SW
Dec. 11	2	S	SW	Mar. 13	1	N	SW
Dec. 12	4	S	WSW	Mar. 13	5	N	NW
Dec. 13	1	S	NW	Mar. 14	10	N	NW
Dec. 14	7	S	SE				
Dec. 15	8	S	SW	Apr. 1	2	N	....
Dec. 16	2	S	NW	Apr. 2	1	N	..
				Apr. 4	15	N	NNW
1952				Apr. 4	1	None	NW
Jan. 14	1	None	...	Apr. 5	2	N	SW
Jan. 14	1	S	....	Apr. 17	2	N	NW
Jan. 14	1	N	....	No more Monarchs through May 5.			

These data show clearly that during December the flight was strongly southward and during March and April as strongly northward. The almost complete lack of Monarchs during January and February is noteworthy and suggests that the butterfly removes to a latitude lower than 28°.

The unanimity of the flight is curious.

The fact that the flight tends to be always north (actually slight northwest or north) or south is quite understandable because the Monarch has a strong tendency to move parallel to shorelines and under the circumstances of Indialantic only the northward or southward tendencies of movement can manifest themselves. Indeed, the straightened circumstances of Indialantic make it singularly favorable for observations of the present kind.

The data show that the Monarch was responding to wind in what seems to be its usual fashion, *i. e.,* flying into it. Thus of the 27 flying south in December, 24 flew into southerly winds. Of the 40 Monarchs flying north in March and April, 33 flew into northerly winds, 4 were following southerly winds (and for 3 no wind is given).

It is to be hoped that Mr. & Mrs. HODGES will continue their patient recording of occasional butterflies, for if they do so they may be able to inform us whether the Monarch does migrate constantly throughout the year and when its tide of migration turns. Let us also hope that other observers in the low latitudes will join them.

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