In the Great Basin at lower elevations *H. juba* also flies at rabbitbrush season and engages in massive, continuous flower visitation.

Could a spring generation emerge in June from eggs laid the past September at Donner? It is difficult to see how. Skippers grow slowly as a rule; in optimal weather development from a June egg to a fall adult requires 8–11 weeks. A September egg would have, on the average, 6 to 8 weeks before continuous snow cover developed. During this time the days are shortening rapidly, and ambient temperatures exceed 10°C for only a few hours a day while nightly minima may reach −10°. An increasing number of days have little or no sunshine. MacNeill found that captive larvae kept outdoors in the San Francisco Bay Area would not feed in cool, cloudy weather but resumed activity immediately in strong sunshine or at indoor temperatures. It is difficult to envision much activity or growth after early October at Donner, and impossible to envision under snow. Moreover, the grasses are in poor condition at this time. The most important spring host seems to be *Agrostis idahoensis* Nash, which is mostly brown in October but grows rapidly after snowmelt. After snow leaves an area adults are generally not seen for 2 or 3 weeks. Ambient temperatures are often high and the days are quite long, but this is a very short developmental time for a skipper! Moreover, most of the *H. juba* at Donner in spring are worn when first encountered. If little or no wear is shown by fall adults three weeks into the flight, why should newly emerged spring animals deteriorate so rapidly?

It is not inconceivable that *H. juba* could have a "mixed strategy" of overwintering as adults, eggs, and perhaps young larvae. The two latter stages are common among Hesperiines. Absolute proof of overwintering will require detection of hibernating adults in midwinter, or the recapture in spring of individuals marked the previous autumn. In the absence of such direct evidence the inferential case is rather compelling.

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A MIGRATORY FLIGHT OF *URANIA FULGENS* (WALKER) IN HONDURAS (URANIIDAE)

Urania fulgens has long been known as a migratory diurnal moth. Williams (1930, The Migration of Butterflies, Edinburgh; 1958, Insect Migration, London) has provided excellent summaries of earlier published observations on their migratory flights. These include records from most of Central America from Mexico to Panama and in Colombia and Ecuador. Although we have seen no prior records of flights in Honduras (they may exist), there was no reason not to expect them there.

Williams (1958, op. cit.) tabulated over sixty records of flights from Central America and found in these some evidence of a change of direction of flight at different seasons (including return flights from Mexico and Costa Rica). He found reports of flights from March to August, with a preponderance to the north in March and April and to the east or southeast in June and September. However, he concluded that more records and more accurate compass-directions are needed. On this basis the following brief note is offered.

On 24 August 1978 while seated on a terrace of the Gran Hotel Tela, Tela, Distrito Atlantida, Honduras, during a light rain near mid-day, we noticed a number of *Urania* *fulgens* (Walk.) in flight at an elevation of 10–12 m above ground level. The flight pattern was not random, but directional, and generally southwesterly around two sides of the terrace. The following morning at 0600, upon walking onto the front balcony of the hotel which faced on the main street of Tela, we saw large numbers of individuals flying along the street from northeast to southwest. They flew singly or in small groups at levels ranging from one or two m to 12 or 15 m above the street level. The sky was overcast and a light rain was falling after intermittent heavy tropical showers during the night. Five minute counts yielded more than 150 individuals and we estimate that 1,500–1,800 flew past during the hour in which they were under observation. When we terminated observation at 0700, there had been no visible let-up in the flight.

At about 0800 we left Tela by car for El Progresso. This section of highway runs in a generally northwesterly direction and in the northwesterly stretches, the moths continued to cross the highway toward the southwest in large numbers over a distance of at least 30 km but began to disappear or lose their directional flight as the road moved into the mountains.

Where the road crossed the flight lanes, hundreds of dead or stunned moths were on the highway. Stopping to collect a sample of perfect specimens we found that ants reached them within minutes, eating the abdomens of still-living individuals. However, we obtained 39 freshly-emerged specimens in satisfactory condition in half a dozen brief stops. The sex ratio in our samples was 26 ♂♂:13 ♀♀.

Thus, in the flight observed by us in late August, the direction was from northeast to southwest, in contrast to reports of others for this general time period.

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CAPTURES OF LARGE MOTHS BY AN ULTRAVIOLET LIGHT TRAP

Early in April 1978, J. Muller installed a standard black light trap, made by the Ellisco Company, on C. B. Worth's farm in Eldora, Cape May Co., New Jersey (Fig. 1). This trap, plugged into an ordinary electric outlet, uses a tube of only 15 watts, emitting both visible blue and ultraviolet (black) rays. Insects striking the four vertical baffles surrounding the tube fall through a funnel into a collecting chamber containing cyanide or other lethal volatile chemicals. The trap is standard equipment for agents of Rutgers University monitoring the abundance of flying phototropic agricultural pests throughout the state of New Jersey.

Muller had been collecting moths on this farm by other means since August 1972, as part of his statewide survey of the macrolepidoptera of New Jersey (Muller, 1976, J. New York Entomol. Soc. 84: 197–200, and unpublished). Since the farm is isolated and not close to competing lights, this new trap presented an opportunity to study the extent to which an ultraviolet light diverts moths from their natural nocturnal functions. It was decided to record all sphingids and larger saturniids that were removed from the environment at this focus (Table 1).

For a few days, from time to time, the trap did not operate well because of exhaustion of the lethal gases. However, the kill (summarized in the table) remains representative for comparative purposes, since the flight period of most species occupies several weeks. In the case of double-brooded species there must obviously be two peaks of abundance; these have not been separated in the table.