

Migration tracked

Butterflies' winter home found



Sunbathers

Sluggish monarch butterflies cling to Juan Sanchez, who helped find their long-sought winter hideaway deep in the mountains north of Mexico City.

Where do all the butterflies go?

Fred A. Urquhart finally knows. The question, anything but whimsical to this Canadian zoologist, has been on his mind ever since 1937.

The answer solves one of the major mysteries of animal migration.

In the August National Geographic, Dr. Urquhart tells of tracking this insect odyssey of almost unbelievable endurance and unbending instinct. Dr. Urquhart's investigations have been supported by the National Geographic Society for many years.

The butterflies are the big orange and black monarchs that have teased the butterfly nets of perhaps more enchanted children and earnest entomologists than any other eye-catching insect.

The monarchs flit over most of the United States every summer, then like the birds they head south to escape the frozen winters — and disappear. Where, nobody knew until now.

Monarchs of the western United States, a smaller population living beyond the Rocky Mountains, show up every winter on the Monterey Peninsula.

They turn orange the trees of Pacific Grove, which celebrates their arrival with a parade, and makes it illegal "to molest or interfere with in any way the peaceful occupancy of the Monarch Butterflies on their annual visit to the City ..."

But the bigger eastern population flies south of the Mexican border and vanishes. The butterflies' winter home always has remained hidden despite painstaking tracking of the flight south, using wing tags.

The tags carried tiny I.D. numbers and letters, plus the words: "Send to Zoology University Toronto Canada" — a short address for Dr. Urquhart's laboratory at Scarborough College of the University of Toronto.

Through the years, Dr. Urquhart and volunteers of the Insect Migration Association, which he had started, tagged several hundred thousand monarchs. Soon tagged butterflies were being returned in the mail, and migration maps gradually were drawn.

The lines pointed to Mexico, where they faded out. Ads placed in Mexican newspapers by Dr. Urquhart's wife, Norah, asking for volunteer butterfly spotters brought an offer to help in the hunt from Kenneth C. Brugger of Mexico City.

On January 9, 1975, Mr. Brugger excitedly telephoned, "We have found them — millions of monarchs — in evergreens beside a mountain clearing."

Urquhart joined him by the next wintering season and saw the monarchs himself, 20 acres of them covering more than 1,000 trees, the limbs sometimes breaking under the weight of the butterflies.

The wintering area is north of Mexico City, 9,000 feet in the mountains where temperatures hover just above freezing, ideal for the monarchs. Inactivated by the chill, they burn up almost none of the reserve fat they need to fly northward again.

One butterfly had been tagged by a volunteer in Minnesota. The Urquhart party tagged 10,000 of the Mexican monarchs, hoping to solve another mystery: whether any will make it back to the northern limits of the species' range after their mating and departure last spring.