

OSU scientist writes the first book on Oregon butterflies

An Oregon State University scientist is writing the first book ever about Oregon butterflies — some 200 different kinds at the moment but at least two or three are on the edge of extinction.

To get the necessary data and specimens for study and photographing, Ernst J. Dornfeld has tramped Oregon from marsh to mountain for more than 30 years.

"The higher you go, the more abundant the butterflies," Dornfeld said. "Mountain meadows virtually swarm with them. In marshes, you'll find certain rare species. Dry up the marshes and those butterflies will be gone forever."

"Contrary to what many believe, only a few kinds of butterflies migrate. Most never go more than a few hundred yards from their birthplace. Their lives depend on particular plants on which the larvae feed." Oregon's butterflies are "extremely interesting because of the wide range of ecology and geography."

Dornfeld added. "Only about two dozen of the 200 different kinds are found statewide."

"Most are found only in particular places — the Columbia Gorge, salt spray meadows on the coast, the Cascades, the Siskiyou, the Willowa Mountains, etc. There's a small butterfly found only in 2-3 acres of swampland on the Big Summit Prairie in the Ochoco Mountains, for example. It came down from the Arctic Circle a long time ago when climate conditions were far different. And there's another butterfly found on the 8,000-foot summit of Drake Peak in the mountains of Lane County."

Eastern Oregon, with its more varied geography, has more butterflies than western Oregon, Dornfeld notes. Coastal counties have the fewest.

Most people like butterflies for their beauty. Dornfeld sees them as having "great scientific interest and value. There are few organisms from which you can learn so much biology."

Man from Butterflies? Butterflies lend themselves "remarkably well to studies of the evolutionary process and of the genetics of populations," he added. In this regard, they've drawn a lot of interest from the world scientific community in the past 20 years.

"Environmental changes, whether natural or induced by man, rapidly affect the butterfly populations of any area," Dornfeld observed. "Destruction of food plants and habitats have reduced many species to an endangered existence — and some to extinction. A program of designating habitat preserves has recently been started, including such an effort along Oregon's coast to protect the rare *Hippolytia fritillaria*."

The U.S. has about 750 species of butterflies; the world, about 13,000, most of them tropical varieties.

Oregon's most advertised butterfly — seen in picture if not in person — is the gorgeous yellow-and-black Oregon Swallow Tail, Dornfeld reported. It was selected as one of four butterflies

pictured on U.S. stamps. Its usual habitat is the upper Columbia River area (The Dalles and above).

Dornfeld plans to have life-size photographs of the different species of Oregon butterflies in the book: male and female, wing tops and undersides. The colors and patterns often differ with sex.

Dornfeld does all his own photography at home. And his private collection of butterflies — 25,000 plus — is the state's largest.

The evolutionary development of color and wing patterns is linked to protection and mate recognition, Dornfeld explained.

"Patterns and colors are

very often of a concealing nature. The butterflies blend in with their usual surroundings — bark, leaves, etc. The bright colors dazzle and confuse predators, primarily birds. The colors and designs — such as eye spots on the wings — are very functional. They're patterns of distraction, warning or camouflage, not just beauty."

Some Poisonous A few butterflies, such as the famed monarch, contain poisonous substances as a protection. A bird that tries to eat a monarch butterfly will become violently ill, Dornfeld explained.

"One bitter bite teaches a lesson that is long remembered. The Viceroy butterfly, which looks like the monarch, is harmless food but birds leave it alone too because it looks like the butterfly to be avoided."

The monarch is unique in its migration habits too, Dornfeld noted. "All of the monarchs we see here are migrants from Southern California or Mexico. They may lay some eggs here as they pass through. The larvae feed on milkweeds, but the species can't survive the winter here."

Scientists have marked monarchs, then released them to study migration. The longest migratory trip to date is 2,400 miles. The longest distance traveled by a butterfly in a day is 80 miles.

The Painted Lady (brownish red) butterfly, familiar to most Oregonians, migrates in great swarms. "But not annually. Only in certain years," says Dornfeld. "We don't know why."

Motorists know well of migrations of the orange-colored California Tortoise Shell butterfly. "In certain years, they come north from California in tremendous numbers," says Dornfeld. "The swarms on the Cascade Mountains highways are so big sometimes that cars driving into them get their radiators plugged, their windshields covered, and the roads can even become slick from dead bodies of butterflies."

Dornfeld's book will list usual flight periods for the various butterflies of the state. The normal activity period for most runs from June to August. But some species start earlier and a few fly into November.

Flight periods are tied to sun and temperature, Dornfeld stated. "They have to have certain amounts of heat to fly, in contrast to moths that don't. Notice next time how quickly the butterflies go into the grass when clouds cover the sun."

Butterflies are "very specific" in their feeding, the scientist pointed out. The larvae live — and chew — on usually one particular plant: sage, wild carrot, violet, etc. Adults get energy by sucking the sugars of flower nectars.

Garden news

Compare produce stands, groceries for best buys

by RITA S. GERKE special writer

If you are willing to don your boots, bend your back and bring your own containers, there is still time to get top quality vegetables at local U-pick farms, open seven days a week until the first frost. Besides being open for U-pick, local farms have their own produce stands and sell to local distributors. The vegetables you buy at grocery chains, for example, may have come from one of these farms, which grow many of the same varieties of vegetables as the home gardener, such as the delicious 'Golden Jubilee' corn, tomatoes, beans, cucumbers, peppers, parsnips, and zucchini squash. Can you imagine 30

acres of zucchini? Many of these vegetables are sold only to the wholesale market, rather than U-pick.

After looking over one U-pick farm, I checked prices of these vegetables at four Gresham area stands and a local grocery store. The conclusion is as one would expect.

You have to be aware of prices and constantly compare U-pick and canning boxes from produce stands are usually, but not always, the cheapest. There was not as much difference between the store and the produce stands as might be expected, but this varied with the item.

On the day I checked, the actual price of corn varied from a low of 5 cents to a high

of 14 cents per ear. This becomes important when you are freezing a year's supply. Canning tomatoes could be bought at one produce stand for 21 cents a pound.

There was a large variance of prices among local produce stands on some vegetables. For example, cauliflower varied from 49-79 cents per pound. Pickling cucumbers varied from \$2.98 to \$4.75 per flat for No. 1s. Always check the grade and size or weight of box on these.

After checking all the prices, I had the satisfaction of coming home and picking corn from our own garden. Price — 70 cents for one large package of seed.

And I didn't even have to water it this year.

Public notices

The Sandy Elementary School District No. 46 complies with U.S. Public Law 94-142 and Section 504 of the U.S. Rehabilitation Act dealing with the education of handicapped students and the rights of handicapped persons. The district conducts two census surveys each year to identify handicapped students not in school. If you are aware of a handicapped child not receiving an education, please contact Clark Lund, Superintendent of Schools or Lura Dell Callaghan, Director of Pupil Personnel Services. Phone 668-5541. P-9-21-78

ceptance of the work by the City will also be required. The successful bidder must show evidence of adequate liability and property damage insurance. The City of Sandy reserves the right to postpone the award of the contract for ten (10) days and to reject any or all bids for good and sufficient reasons. The award of the contract will be made to the responsible bidder submitting the lowest acceptable proposal. By order of the Mayor and City Council of Sandy, Oregon. June Isakson Recorder P-9-21-78 9-28-78

The Zoning Ordinance, on October 4, 1978, the Board of County Commissioners will review the Planning Commission's recommendation for a proposed amendment to the Zoning Ordinance. This proposed amendment would change Section 10, Non-Conforming Use, to comply with ORS 215.130. Specifically, this proposal amends subsection 10.4, Damage and Destruction, to allow reestablishment subject to specific criteria, subsection 10.51 Expansion of Non-Conforming Use to not allow expansions, and 10.6 repairs to allow upgrading of structure and premises subject to Design Review approval. The file no. Z0-79 is available for inspection in the office of the Clackamas County Planning Department, 940 Warner Milne Road, Oregon City, Oregon, during normal working hours, 8 a.m. to 5 p.m. P-9-15-78 9-22-78

NOTICE OF HEARING
On September 25, 1978, at the hour of 7:30 p.m., in Courtroom 2, second floor County Court House, Oregon City, Oregon, the Planning Commission will review a proposed amendment to

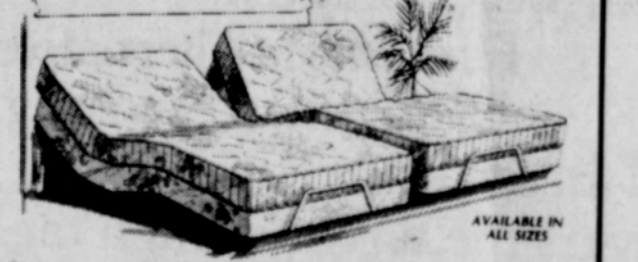
CITY OF SANDY OREGON SOUTH BLUFF ROAD IMPROVEMENTS PHASE A RETAINING WALLS NOTICE TO CONTRACTORS
Sealed proposals for furnishing all materials and constructing retaining walls on South Bluff Road for the City of Sandy, will be received by the City Council at the City Hall in Sandy, Oregon until 8:00 p.m., Pacific Daylight Time on October 2, 1978, and thereafter will be publicly opened and read.

The proposed work consists of furnishing all the materials and constructing two retaining walls along the proposed west realignment of South Bluff Road, a total length of 420 feet; clearing and grubbing the proposed roadway adjacent to the retaining walls, and constructing embankment as required. Alternate bids will be received for a steel bin-wall and concrete retaining wall.

Bidders prequalifications must be on file with the City at least five days before opening of bids. Plans, Specifications, Instructions to Bidders and Forms for Proposal and Contract may be examined at the Sandy City Hall or at the offices of Cunningham Associates, Inc., 9401 SE McLoughlin Blvd., Milwaukie, OR 97222. Copies may be purchased by qualified prospective bidders upon the receipt of \$25.00 by check made payable to the City of Sandy, Oregon. The purchase price will be refunded only when a bid is submitted. Otherwise, the payment will be retained to offset the cost of printing.

Proposals must be submitted on the forms furnished with the Specifications and must be accompanied by a bidder's bond payable to the City of Sandy, Oregon, in an amount equal to or exceeding ten percent (10 percent) of the total bid. A one hundred percent (100 percent) corporate surety performance and payment bond will be required at the time of execution of the contract. A maintenance bond guaranteeing the repair of all damage due to improper workmanship or materials for a period of one year after ac-

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