

it from small hollows in granite outcroppings on Arthur's Rock, west of Fort Collins, and overlooking the plains, elevation about 6,800 feet; about four miles east of Allen's Park, elevation about 8,300 feet; and on Old Man Mountain, just west of Estes Park village, elevation 8,300 feet. In these little hollows it was often quite abundant, but smaller than individuals from the alpine ponds. This might well have been due to the lack of food in these temporary puddles. I have also found it in the ponds of the thick timber around the 10,000 feet levels.

I have assumed in the past that wind was a considerable factor in distribution. The eggs undergo desiccation and might then be carried by the wind. The hollows were on exposed outcrops. The winds of the winter half of the year are often quite strong, and prevailing from the west or northwest, so that the eggs could conceivably be carried out over the middle and lower mountains, and dropped in the small hollows which are characteristic features of the rock ridges and outcrops.

KENNETH GORDON

UNIVERSITY CAMP,
UNIVERSITY OF COLORADO

A TEMPORARY RESPITE FOR THE WHALE

THE past season's whaling operations resulted in a killing orgy, chiefly in the Antarctic, that broke all records. The world catch, of late increasing from season to season, amounted last year to 38,563 whales, which yielded more than 3,427,000 barrels of oil. The supply so far exceeded all ordinary demands that whaling vessels were laid up and much oil stored. Present-day whaling is largely a Norwegian industry, about which there is not much general knowledge in this country. Naturalists concerned about the supply of whales have been wondering what the next move of the industry, with its huge investment in specially built steamships, would be.

Information received last week from a Norwegian friend in Tonsberg, who knows what is going on, throws light on the subject:

... So far as I can gather, the outlook is this: Next season only the modern vessels will go out, and that only provided they have been able to sell the oil in advance. There is still a quantity of say 500,000 barrels unsold of last season's catch. . . . Sandefjord, Tonsberg and Larvik are the New Bedford, New London and Nantucket of Norway at the present day, with Sandefjord leading. I visited that place the other day, and I must confess that the harbour was a truly magnificent sight; whale catchers in long rows, one alongside the other, and the huge factory ships completing the picture. Some 8,000 men are idle at home this year. . . .

My correspondent adds that only two fleets, those of Leith and Liverpool, comprising four factory steamers with their complete sets of whale catchers, have been sent out. Early last summer I boarded one of the big Antarctic whalers, unloading her oil—55,000 barrels—at Staten Island. She had taken 1,445 whales.

The species chiefly pursued in Antarctic waters are blue whale and finback, which did not figure in the catch of the old time whaler. His methods were less effective. Other kinds of whales, such as sperm, right, humpback and sei, are no longer abundant. These were greatly reduced in numbers during the nineteenth century. The grey whale has become a rarity and the once important bowhead does not figure in modern whaling at all.

There is a year's supply of whale oil on hand. Whaling ventures as a whole are in abeyance until next fall. It is evident that the stock of whales has greatly decreased. It would be deplorable if the last season's slaughter were repeated in 1933, and the world's most important animal-oil resource seriously damaged.

C. H. TOWNSEND

NEW YORK AQUARIUM,
FEBRUARY 13, 1932

EPIZOOTIOLOGY

THESE pages frequently serve as a hospital for sick words. May I therefore bespeak a bed for "epizootiology," whose usefulness appears to have passed and who may well be relieved by the more vigorous word "epidemiology"?

I am acquainted with some learned men who think it an outrage to apply this most valuable word to the spread of disease among animals, men to whom presumably the epidemiology of anthrax conveys a totally different idea from the epizootiology of that disease, but who may be puzzled to find any word for a spreading disease among insects. Surely the idea which is carried by the word "epidemic" centers on disease, and "the spread of disease" as a separate idea does not fundamentally concern the association of that disease with plants, men, animals, land, sea, Europe or America.

Where words are concerned the purists lose in the end; and in spite of what may be said to the contrary common use is often common sense. Valuable new words grow into definite meanings of their own and forget their origins, while bad words die. There can be little doubt that "epidemic" is growing into the recognized English word for disease spreading amongst any community.

A recent correspondent of SCIENCE writes that "the English language would be in better shape if some

people knew less Greek and Latin," and I suggest that, if the epidemiologists will leave their experimental animals for a few moments we might take "epizootiology" from the sick bed to the lethal chamber. Their studies could then be resumed in peace,

free from the disturbing thought that much of their epidemiological research is in reality epizootiology.

VETERINARY LABORATORY,
MINISTRY OF AGRICULTURE AND FISHERIES,
WEYBRIDGE, SURREY
E. L. TAYLOR

SPECIAL CORRESPONDENCE

EUROPEAN EXCURSIONS IN 1932

Two cooperative excursions through Europe are being organized for the summer of 1932, the programs of which present some unusually attractive features and the costs of which will be moderate. While intended primarily for entomologists attending the Fifth International Congress of Entomology at Paris in July, and for their families and friends, other scientific men, up to certain limits, will be welcome.

The first group will sail from New York on the *Leviathan* on June 11, visiting (among other places) Copenhagen, the Gota Canal in Sweden, which will be partly traversed on midsummer night when all the village folk hold festival and dance all night in the open air; Stockholm, Uppsala, the summer home of Linnaeus at Hammarby, and thence by rail northward to the Swedish National Park in Lapland, where a stay of some days will be made on the Arctic tundra at Abisko with views of the midnight sun. Those who wish will have time to continue by excursion steamer to the North Cape and back. Returning to the Continent, some days will be spent in Holland and Belgium before going to Paris for the congress. After that event there will be a week's excursion in the Pyrenees, arranged by the French local committee of the congress. Then Avignon will be visited, with an excursion to Orange and the home of Fabre at Serignan. Continuing to Grenoble, the party will traverse the Savoyan Alps by motor coach to Argentières at the foot of Mount Blanc, and after some days will continue by motor coach to St. Jeanne de Maurienne, and thence into Italy, where Turin, Genoa, Pisa, Naples, Rome, Assisi, Perugia, Florence, Bologna and Venice will each be visited. Continuing over the Brenner Pass, a short stay will be made on the Eibsee in the Bavarian Alps, with opportunity to ascend the Zugspitze, Germany's highest peak. Munich, and the three beautifully preserved medieval cities, Dinkelsbühl, Rothenburg and Nuremberg, will be visited, also Leipzig during the autumn fair, Dresden, the Spreewald and Berlin. After a

final few days in England the party will sail for home on September 17 from Southampton.

The second group will sail from New York on the *Olympic* on July 1, joining the first group in Holland and remaining with them until the Alps are reached. They will omit Italy, and make a somewhat swifter tour of Germany, with also a few days in England before sailing on August 27, on the luxurious new liner *Manhattan*. Those wishing to go directly to the congress will sail on the *Majestic* on July 8.

These are not conducted tours in the usual sense, but are organized for pecuniary benefit of individuals comprising a group. Members will be free to follow their own inclinations at the stopping places, and in the larger cities in most cases may take their meals at restaurants of their own choosing. While many of the points to be visited were selected because of their importance as entomological centers, all will be full of interest from other points of view.

Estimates are based upon tourist class (former second class) at sea, second-class railway, unpretentious but thoroughly comfortable and clean hotels and inexpensive restaurants, with an allowance for side-trips and for incidental and personal expenses. They have been kept as low as possible, consistent with comfort, in order to make the trips available for students of limited means, who may look upon them as part of their educational equipment.

Readers of this notice, who may be going to Europe, even though not as members of one of the groups, are welcome to share in certain advantageous arrangements which the committee has been able to make, provided they request the committee to obtain their steamship reservations for them.

For complete circulars and information address the undersigned, who is chairman of the Joint Committee of the Entomological Society of America and Association of Economic Entomologists on Transportation to Europe.

O. A. JOHANNSSEN

ROBERTS HALL,
ITHACA, N. Y.

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A MICROSCOPE FOR OBSERVATION OF FLUORESCENCE IN LIVING TISSUES

FLUORESCENCE, the phenomenon which makes possible the technique described below, has been utilized

in microscopic work, but principally in relation to the study of inanimate organic compounds. It may be defined as the property possessed by certain substances to generate light which is different in color