ENTOMOLOGY

Seeing Eye to Eye With a White Wasp

See front cover

THE medieval Japanese, who sometimes closed up the fronts of their helmets with ferocious metal masks painted with vivid war-paint, knew the right psychology for hand-to-hand encounters. It is much more disconcerting to be confronted with an immobile, wholly artificial hobgoblin face than to see that your enemy's countenance is like your own, no matter how much distorted by rage or bloodthirstiness.

The faces of insects are masks. Because the whole arthropod phylum has evolved its skeleton outside its body, to be at once support and armor, insects are able to move parts of their faces only in rigid, hinged sections; and that, from an anthropopsychic point of view, is not much of an advantage. Some insects make themselves "harder to look at" by wearing vividly contrasting war-paint—for example, this white-faced wasp photographed by Cornelia Clarke.

Science News Letter, September 5, 1931

ZOOLOGY

Russian May Have Perished Seeking Caucasian Bison

A RUSSIAN zoologist, M. Schaposnikov, is believed to have perished in a search for possible survivors of the once large herd of wisent, or old-world bison, that ranged in the wild fastnesses of the Caucasus in prewar days. They were the property of the Russian grand dukes, and Schaposnikov was superintendent of the timber reserves in which they lived. The herd once numbered well over a thousand head, but during the war and the anarchic days that followed the hard-pressed people of the region killed them for food, and probably wiped out the very last animal.

However, rumors of a few survivors have persisted. Early this year, Schaposnikov wrote to E. W. Pfizenmeyer in Stuttgart, formerly Custos of the Caucasian Museum in Tiflis stating that there were specimens of the animals in a remote part of the Caucasus. A later letter stated that he intended to go in person to investigate the matter. After a lapse of several months, Herr Pfizenmeyer has received a letter from Schaposnikov's wife, stating that no word whatever had been received from her husband for nearly half a year, and that she believed he had been killed by bandits. There was no word about the wisent remnant; it is thought highly probable that Schaposnikov's sacrifice was made vainly, on behalf of animals that are no longer there.

The wiping out of the Caucasus herd, and the similar extinction of the herd that once lived in the woods of the old Baltic provinces of pre-war Russia, leave only zoo specimens of the wisent to carry on the losing struggle for survival. At the beginning of the present year, the whole number of pure-blooded wisent in all the zoological gardens of Europe was 61. Thirty-two cows and 29 bulls, including six calves of 1930, made up the count. During 1931, one bull calf and two heifers were born; but one of the heifers died.

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ETHNOLOGY

Incan Hymns Resemble Biblical Appeals to God

ELOQUENT hymns to a creator god, long ago composed by Incas of Peru, puzzlingly resemble some of the Old Testament passages addressed to Jehovah. That the similarity of thought is due to "an approximate likeness in mental culture between the folk of ancient Palestine and the folk of ancient Peru" is the explanation offered by Philip Ainsworth Means.

One prayer to the Peruvian creator god Pachacamac, showing the philosophic heights to which the Incan mind attained, is as follows:

"O Pachacamac! Thou who hast existed from the beginning, Thou who shalt exist until the end, powerful bu. merciful, who didst create man by saying, 'Let man be,' who defendest us from evil, and preservest our life and our health, art Thou in the sky or upon the earth? In the clouds or in the deeps? Hear the voice of him who implores Thee, and grant him his petitions. Give us life everlasting, preserve us and accept this our sacrifice."

Some writers have held that the religious poems of this type composed by the Incas must have taken their present form after the Incas were in contact with Spanish priests and Bibles, Mr. Means explains. But opposing this view, he argues that many Catholic missionaries who flocked to Peru after the Conquest left writings showing that they had found evidences of the exalted spirituality already existing in the people, and that they used it in their efforts to convert the people to Christianity.

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IN SCIENC

ORNITHOLOGY

London Sparrows Have Begun Losing Their Tails

A STRANGE degeneracy has overtaken the London sparrow since the World War. His tail feathers are breaking off at the roots, sometimes so closely that the quills appear to have been pulled out. But the middle feathers leave stumps a little longer, so that the damaged tail has a rounded appearance. The normal feathered tail, however, is slightly forked. The birds do not seem otherwise degenerate. Whatever the cause, it acts on males and females alike, and swiftly, for one does not see partly broken tails.

Before the World War, Londoners remember sparrows appeared with white feathers in their tails. These disappeared for a few years, but have returned.

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RADIO

"Boutonniere" Microphone Gives Speaker Freedom

A MICROPHONE so small that it can be hung on a speaker's coat lapel or even be hidden in his vest pocket has been developed for the Western Electric Company by engineers of the Bell Telephone Laboratories.

The miniature "mike" is designed to take the place of the present array of fixed microphones that line the front of the speaking platform at every notable occasion. It can be used either in radio transmission or with public address amplifying systems. One speaker has already used this microphone hiding it in his pocket and running an invisible cord down a trousers' leg. A long pair of flexible conductors permits freedom of the stage.

The instrument is in reality a new type of telephone transmitter which is just coming into use by switchboard operators, placed in a mounting for mechanical protection. To cut down the rumble of a speaker's chest sounds, a circuit containing an electric filter arranged to give a pleasing balance of sound is provided.

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E FIELDS

ARCHAEOLOGY

Pennsylvania Museum to Dig Again in Mesopotamia

THE MUSEUM of the University of Pennsylvania and the American Schools of Oriental Research plan to resume archaeological work at Tell-Billah in Mesopotamia, the expedition again to be directed by Dr. Ephraim A. Speiser.

Dr. Speiser sailed for Leiden, Holland, on August 26 as a delegate to the eighteenth international Congress of Orientalists, where he will represent the United States Government, the University of Pennsylvania, and five other scientific institutions. He will present a paper on "The Ethnic Problems of Mesopotamia."

Immediately following the close of the congress Dr. Speiser will leave for Syria, where he will join the eight other scientists forming his staff. The entire group will then cross the desert to Damascus and proceed to their camp near Mosul, which will serve as the base of the operations during the season of 1931-32.

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METEOROLOGY-ENGINEERING

Akron to Use Radio "Feelers" for Air Testing

WHEN THE NAVY'S new monster dirigible "Akron," settles toward a landing field obscured by fog or cloud, she will not have to "go it blind," but will drop a radio-equipped "feeler" that will signal back to an automatically registering apparatus the atmospheric conditions in the unseen air levels below.

The instrument was invented by a Russian scientist, Prof. Moltschanov. It was designed originally for use in an entirely opposite direction, namely for sending aloft attached to small drifting balloons, to obtain meteorological information at high altitudes. It was intended especially for use in the Arctic and other unpopulated regions, where the ordinary meteorographic balloons, which depend on being picked up and sent back to headquarters by farmers and woodsmen, would of course be useless. It carries instruments to measure temperature, air pressure and atmospheric moisture, and an automatic radio sending apparatus, whose signals are picked up and recorded on a revolving drum by the receiving apparatus.

The Navy has ordered two of Prof. Moltschanov's sets, and expects to have them in use in a few months. In practice, the sending set will be dropped from the "Akron" on a long cable, to "feel out" atmospheric conditions underneath, and inform the navigating officers whether there is clear air under a given cloud surface, or whether there is solid fog to the ground.

Although there will always be a solid connection between the "Akron" and the sending set, the atmospheric data will still be transmitted by radio, because it is simpler to handle it that way than to make electrical connections and receive the data up the suspending wire.

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GAME RESERVES

New Game Reserves Protect Dwindling African Herds

TWO new game reserves in South Africa have been established by the Parliament of the South African Union.

The largest of these lies between the Aub and Nossob rivers in northwestern South Africa, formerly German Southwest Africa, and has an area of about 1,800,000 acres. Here the gemsbock or oryx, entirely exterminated in other parts of South Africa, still lives in large herds; and there are other kinds of antelopes including koodooes, elands and gnus or hartebeests, as well as lions and leopards and rare birds.

The second reserve is called the Addo reserve. It has an area of over 11,000 acres and lies in the eastern part of the Union. It is the last refuge for a few of the South African elephants, which are much smaller than those of Central Africa.

There are 40 of these now on the reserve, and the government has taken care to provide sufficient watering places for them. Lack of water has been one of the causes of their extinction in numerous other places.

These new reserves are cared for by the South African National Park department, which also administers the Kruger National Park, this latter being perhaps the greatest game reserve in the entire world.

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METEOROLOGY

Rain, Not 1930 Drought, Cause of Abnormal Crops

FARMERS who believe that last year's drought affected soil chemically to improve it for this year's crop are mistaken, according to J. B. Kincer, of the U. S. Weather Bureau.

"Abnormal crop growth this year is due entirely to contemporary weather conditions," he said, "and in no way may be attributed to improvement of soil conditions."

The summer, particularly the month of July, has been unusually warm, and rainfall has been above normal in Atlantic seaboard and southern states, it was explained. Under such conditions, all vegetal matter grows rapidly.

The fact that disproves the theory that soil is chemically changed may be brought out by comparing eastern and southern state crop conditions to those in the corn belt, through the north and northwest.

In the belt the drought was just as severe as in the east, yet subnormal rainfall has caused crops to be considerably below normal.

Plenty of heat, coupled with constant moisture due to opportune rainfall, are the causes for abnormal crop growth.

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BOTANY-MEDICINE

Brazilian Wood Causes Skin Poisoning Like Ivy

CASES of skin poisoning among woodworkers, similar in many respects to the effects of poison ivy or poison oak, have been investigated by the U. S. Public Health Service, which has just reported its findings.

The trouble has been due to a hardwood imported from Brazil. In its native land, the wood is known as "embuia"; in America it is given the trade name of Brazilian walnut, though it is not a true walnut but a relative of the laurel. It is highly prized as a material for fine woodwork in Brazil.

"Patch tests" given by applying sawdust from the wood to selected skin areas on human volunteers definitely determined its guilt. Not all persons are susceptible, however, and susceptible persons often acquire immunity.

During the war, Brazilian walnut was imported to some extent for use in gunstocks, but as far as is known no trouble was reported at that time.

Science News Letter, September 5, 1931