

## ORNITHOLOGY

# More Ducks Fly South

**Estimated 150,000,000 waterfowl will migrate this season—greater number than for any year since 1910. Most go in October.**

► **MORE DUCKS** and other migratory waterfowl are flying southward this year than any time since 1910, Dr. Ira C. Gabrielson, director of the U.S. Fish and Wildlife Service, reports.

As many as 150,000,000 ducks, geese and other waterfowl are expected to hasten southward, it is estimated. This figure is in marked contrast with the mere 27,000,000 which were believed to have participated in the annual migration seven years ago.

River ducks such as mallards, pintails and widgeons have been among the species showing the greatest increase in number. Diving ducks on the other hand, particularly the redhead, have been slow in coming back.

The annual southward migration usually begins in August with the males of some species. The largest flights, composed mostly of females and their young, occur in October after storms and cold have driven them from their summer breeding grounds.

Migrating birds do not make a bee-line flight southward. They follow certain great paths in the air known as "flyways," and once having chosen a flyway, continue to travel that particular route year after year.

One of the principal North American flyways guides the fowl down the great central valley of the Mississippi river and its tributaries. Another, roughly parallel, is over the western Great Plains, along the east foothills of the Rockies. The Atlantic and Pacific flyways, as their names indicate, lie roughly between the ocean and the nearest high mountain ranges, although subsidiary migration routes spread inland.

A number of theories have been advanced to explain the seasonal migration of the birds, one of the outstanding ones being based on the changing length of the daylight hours.

A pioneer observer of this phenomenon of the birds traveling southward when the days grow shorter and northward when they grow longer was Henry Seebohm, a widely traveled English ornithologist. Actual experiments were conducted with birds under day-lengths which were changed artificially by Prof. W. Rowan of the University of Alberta. Prof. T. Hume Bissonnette of Trinity College, Conn., showed that as the days grow shorter or longer, certain important changes take place in the glands which control the bird's behavior.

*Science News Letter, October 16, 1943*

Beneficial results were also obtained in cases of latent syphilis of the central nervous system. "Measurable benefit" was obtained in patients suffering from warts and lichen planus.

A separate report on 15 months of clinical trial of the drug will soon be issued. Meanwhile animal experimentation indicates "that several other members of the series (of compounds) are suitable as therapeutic agents."

Solutions of the new drugs are neutral, unaffected by mild acidity or alkalinity and are stable in all body fluids. This stability allows the compounds to pass through the stomach and remain soluble in the normally alkaline intestinal fluids.

"This property makes possible intestinal absorption in amounts previously impossible," the researchers stated. "It now appears that wider margins of safety, as well as high and more uniform blood levels of bismuth are possible during oral administration as compared to the standard intramuscular route previously employed."

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## Sulfa Drugs Used Externally

► **MORE EFFECTIVE** germ-fighting sulfa drugs for external use seem probable through discovery of new compounds reported by Dr. Paul Goedrich of the New Jersey College of Pharmacy, Rutgers University.

Interacting iodine with a series of the well-known sulfonamides, Dr. Goedrich obtained adsorption compounds which showed germ-killing power against a wide range of germ types. Unlike the regular sulfa drugs, they did not seem to be choosy about the kinds of germs they attacked.

"The most striking feature of these compounds," Dr. Goedrich reported, "is seen in the fact that when the total iodine is removed from the sulfonamide-iodine compounds, they still demonstrate a germ-inhibitive and sometimes germ-killing action, in vitro [the test tube], whereas the unchanged, original sulfonamides show no such action at all."

This shows that their unusual action is not due to the iodine alone. After iodine removal, the pharmacists were told, the drugs can still be recognized as sulfas by official test, but that chemical changes have occurred is demonstrated by comparative bacteriological testing.

## PHARMACY

# New Uses for Bismuth

**A new series of bismuth compounds shows promise in treating cases of advanced syphilis. It may also prove helpful for less serious ailments such as warts.**

► **EFFECTIVE** treatment of certain types of syphilis may result from an entirely new series of bismuth compounds which can be taken by mouth instead of the intramuscular injections now ordinarily used. A few less serious ailments, such as warts and a persistent inflammatory skin disease called lichen planus, are also expected to be amenable.

Preparation, properties and clinical trial of the new drugs were reported to the meeting of the American Pharmaceutical Association in Columbus,

Ohio, by Dr. Larry M. Wheeler, Dr. R. A. Kuever, Dr. E. G. Gross and Dr. R. Nomland of the State University of Iowa.

"Preliminary clinical studies in the Department of Dermatology and Syphilology revealed encouraging results following oral administration of dihydroxypropyl bismuthate to syphilitic patients," the researchers reported. Only advanced cases in the second and third stages were available for experimental treatment.