

## 'IT'S DONE WITH MIRRORS' IN NEW BIRD EXHIBIT

By EMMET R. BLAKE  
CURATOR OF BIRDS

VISITORS to the hall of bird habitat groups (Hall 20) will almost certainly notice, at the east end of the penguin exhibit, a new installation in which the conspicuously distinctive summer and winter plumages of a willow ptarmigan are shown. Each of these seasonal plumages, brown in summer, white in winter, is displayed against a diorama of identical views in the Alaska mountains, but at different seasons.

Those who pause in front of the exhibit even briefly to admire the beauty of the single bird on display at any given moment are likely to question their vision, if not their sanity. For at intervals of a few seconds the ptarmigan, whether in the mottled brown plumage of summer or clothed in winter's white, appears instantaneously to assume the alternate livery, and the habitat changes its seasonal character.



PTARMIGAN—SUMMER PHASE



PTARMIGAN—WINTER PHASE

Pictures cannot quite tell the story the way the actual exhibit does. At the Museum, by clever use of a mirror and alternating lights, first one and then the other of the bird's seasonal plumages is displayed at intervals of a few seconds.

It is an optical illusion, accomplished with the aid of a slanting two-way mirror, concealed lights, and an automatic timing device. Under certain lighting conditions the mirror becomes transparent, permitting one to see the immaculate white ptarmigan in its wintry habitat. Soon the lights change, the winter bird and its diorama disappear and are replaced by the mirrored image *only* of a summer bird and diorama attached to the ceiling of the case.

The Museum's constant search for new and better techniques of display are nowhere better exemplified than in this exhibit

which utilizes a recent technological development to demonstrate a striking biological phenomenon. Arctic birds react to the approach of severe winter conditions in various ways. Most birds, including all of the insect-eaters, migrate southward in the fall and some travel thousands of miles to winter in South America. A few hardy species are able to survive the northern winters, but may undergo plumage changes that increase their chances of survival.

Ptarmigans, the grouse of the Arctic, are typical of the latter group. They live in the tundra and have outposts both in the moorlands of the British Isles and above timberline in our western mountains where arctic conditions prevail. Three of the four quite similar species inhabit North America and molt from brown to white in winter. The fourth, the famed red grouse of the British Isles, is reddish brown throughout the year.

### Visiting Hours Extended for Summer Season

Effective May 1 and continuing through September 3 (Labor Day) visiting hours at the Museum are extended by one hour. The Museum will be open daily, including Sundays and holidays, from 9 A.M. to 6 P.M. At the end of this period, hours will revert to 9 A.M.—5 P.M.

## NEW MEMBERS

(March 15 to April 13)

### Life Member

Richard A. Waller

### Associate Members

Charles Grosberg, Gerald Hollins, George N. Leighton, J. A. Middleton, Arthur Ryan, Samuel J. Sackett, E. Todd Wheeler

### Sustaining Members

Clayton G. Ball, A. B. Dick III, John H. Johnson

### Annual Members

Howard Adler, Donald R. Bonniwell, E. J. Braun, L. B. Buchanan, A. C. Buehler, Jr., Ernest W. Christener, Bernard J. Cogan, Francis D. Edes, Henry Fishman, Frank M. Fucik, A. E. Hibbs, Frank Gall, Gunnar E. Gunderson, Mrs. Dustin Grannis, William P. Hypes, Raymond L. Icely, Frank H. Ingram, Charles N. Jensen, Max Koenigsberg, Arthur M. Krensky, Raymond Kropp, Richard J. Ley, C. H. Lillienfeld, Albert S. Long, Jr., William Ludvik, Nicholas P. Masse, Mrs. Douglas McDonald, Mrs. David H. Milne, Mark C. Morgan, Harold J. Nussbaum, J. W. O'Neill, William Ostermann, Paul J. Panuce, Andrew L. Pontius, Ralph G. Raymond, G. L. Ridenour, Samuel Rome, Theodore Rossman, Byron C. Staffeld, Mrs. John Stephens, J. H. Van Moss, Jr., S. L. Workman

A selection of typical albino birds and mammals is on exhibition in an alcove north of the entrance to Boardman Conover Hall (Hall 21).

## YOUTH SCIENCE FAIR AT MUSEUM MAY 12

HOW AMERICA'S YOUTH is responding to the nation's acute need for scientists, engineers, and technicians, will be demonstrated at Chicago Natural History Museum on Saturday, May 12, when Stanley Field Hall, from 9 A.M. to 5 P.M. will become the scene of the Chicago Area Science Fair.

Exhibitors in the fair will be Chicago-area elementary school pupils from the sixth grade up, and high school students from freshmen to seniors. The fair is sponsored by the Chicago Teachers Science Association. All the exhibits will be the creations of the children and students themselves, prepared outside of school hours, and without help from parents, teachers, or other adults in any of the actual work of production. The scope of the exhibits includes biology, physics, chemistry, electricity, electronics, astronomy, geology, mathematics, and miscellaneous scientific subjects.

Pupils of public, parochial, and private schools throughout Chicago and its surrounding suburbs will participate. About 125 exhibits are expected to qualify for "the big show" in the Museum—these will include only those that have won top honors in local preliminary science fairs to be held at each of the individual schools. The boys and girls who prepared each exhibit will be present at the Museum with their creations to demonstrate, and to answer questions.

A committee of judges appointed by the Chicago Teachers Science Association will inspect each exhibit, and will also interview the boy and girl exhibitors to determine their knowledge and background in their subject. The results of these oral tests, as well as the skill and imagination revealed by the exhibits themselves, will be factors in selecting winners of the final awards. There will be awards for the best exhibits from each school grade level.

In previous years, exhibits from north, south, and west sections of the Chicago area were displayed at different institutions, on different dates, and there were divisions between grade and high school projects. This year for the first time all exhibits from the entire area will be assembled at one place and at one time. Because of the Museum's many activities for school children, high school and college students, and teachers, it was selected as a logical location for this year's comprehensive science fair.

During the morning of the same day, May 12, beginning at 9:30, a Chicago Area Science Conference will be held at the Museum. This will begin with a general assemblage, after which the delegates will split into groups to discuss specific subjects. Theme of the conference is "Today's Youth—Tomorrow's Scientists and Engineers."





Reynoso, Alvaro. 1956. "It's Done With Mirrors' in New Bird Exhibit." *Bulletin* 27(5), 5-5.

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