

all but skilled pilots using high-grade equipment.

American soaring has progressed to the point where minimum contest standards in effect for the national soaring meet next summer equal those in effect in Germany, homeland of motorless flight, Lewin B. Barringer, general manager of the Soaring Society of America, told its national convention.

Summarizing progress made during the past year, Mr. Barringer revealed that sailplane pilots must conform to

minimum flight standards of five hours' duration, 3,500 feet for altitude or 35 miles for distance. The provision will eliminate all but high performance sailplanes from the meet.

A Soaring Society expedition will be based at Wichita Falls, Texas, from April 10 to May 8 to test flight conditions over the great Southwest plains area. The period of testing will be climaxed by a goal flight contest from Wichita Falls to Tulsa, Okla., a distance of 215 miles.

Science News Letter, February 26, 1938

ARCHAEOLOGY

Dead Men's Heads Carved On Ancient Temple in Peru

See Front Cover

DEAD men's heads on a prehistoric temple wall!

This is grim evidence of religious head-hunting in ancient Peru, reported by Donald Collier, young archaeologist, who has returned from making some remarkable discoveries in company with Peru's most noted archaeologist, Dr. Julio Tello. Mr. Collier, son of Commissioner of Indian Affairs, John Collier, is preparing his report for the Institute of Andean Research, which he represented.

The weird art subjects were discovered, Mr. Collier said, when the expedition unearthed a remarkable ceremonial terrace of stone on the coast of northern Peru. On some stones, they found carvings of warriors making vigorous gestures. Other portraits had no bodies but were mere cadaverous-looking faces "all cut off obviously under the chin."

"The supposition is that they had human sacrifice," he explained, "and one form was to take human heads—whether heads of their own people or those of enemies, we don't know."

Mr. Collier describes the stone temple, its art, and the cemetery nearby as all revealing a new kind of culture, unlike that of other Indians who lived in Peru before the great Incan Empire was formed. These ancient Indians who built the stone temple lived perhaps 600 A.D., or around 900 A.D.—dating them is mere guesswork, Mr. Collier says. Aside from three kinds of pottery buried in strata of earth, there is nothing to suggest passage of time, or any particular era.

This is the first discovery of a temple of giant stones on the coast land of Peru. Such temples were built in Peru's

mountains, but coast tribes used adobe architecture.

"This is the first indication," he said, "that some of the highland people came to the coast to live and built a temple, because it must have taken several years to construct the terraced pyramid with these blocks ten feet high and several feet thick."

The mysterious stone workers had a highland background. But where they got their art ideas, and their plain style of pottery making, and their simple ideas of burial—very different from the elaborate mummy-wrappings of some Peruvian graves—is still to be traced, so that science may fit these unknown Indians into the pattern of Peru's prehistory.

Science News Letter, February 26, 1938

GEOLOGY

Ancient Rocks Identified By Two Trilobite Genera

ROCKS of a geological formation half a billion years old, scattered from Alabama to Labrador, have been identified as belonging to the same system by fossils they contain, of two genera of trilobites, which are distant relatives of lobsters and crabs, long since extinct. The rocks, of early Cambrian date, have also been shown to be similar to others in Scotland and Greenland.

The investigations were carried on by Dr. C. E. Resser of the U. S. National Museum and Dr. B. F. Howell of Princeton University. The key trilobites, whose flattened external skeletons were found in the rocks, belong to the genera *Wanneria* and *Olenellus*.

Science News Letter, February 26, 1938



CALENDAR MARKER

One of the trilobites that made possible the dating of widely separated sandstones as of the same age.

ETHNOLOGY

Pueblo War Songs Link Indians With Far East

EVEN in their music, American Indians have preserved small clues suggesting Oriental ancestry.

Not that Indians are to be thought of as descendants from Chinese or Japanese civilization. Their stemming off from an ancestral tree goes far back to Mongolian-type tribes that roamed to the northeast tip of Siberia and thence, from time to time, crossed into the northwest tip of Alaska. After that they were Americans, and their descendants "Indians." They brought some crafts and customs with them. They learned many new ones in America, and some groups like the Mayas evolved high civilization.

Anthropologists are greatly interested to detect what Indians owed to Asia, and from what parts of that homeland they gleaned their old culture.

Now, it develops that Indians in the Southwest had a psychological trick in war songs, of raising the song a semitone as it progressed and keeping it there to the end. It was exciting. And remarkably enough, Japanese used the same device in stirring warriors by song.

Miss Francis Densmore, who has studied music of many Indian tribes, first noted this similarity when Pueblos were singing old war songs recently for her to record. Reporting this and other similarities between Indian and Old