ALBINOS FROM DYE BATH

Brought up from earliest tadpolehood in a dilute dye bath, these froglings lost all their small initial endowment of pigment and became albino frogs.

BIOLOGY

Frogs Reared In Dye Become Albinos

FROGS grown in permanent baths of dye do not become colored frogs. They become albinos, lacking color even in their eyes.

This paradoxical result was obtained in a long series of experiments with frog eggs and tadpoles by Dr. Margaret Reed Lewis of the department of embryology of the Carnegie Institution of Washington. Dr. Lewis used very dilute solutions of certain dyes, placing frog eggs and very young frog tadpoles in the various vessels.

The frog embryos that developed in the eggs were normally pigmented until they hatched, after which they lost all color, even from their eyes. The young tadpoles that were placed in the dye solutions after hatching similarly lost color, but did retain their eye pigments. Many of the young frogs showed other eye abnormalities in addition to the loss of eye color.

Dr. Lewis has made a detailed report of the experiments to the *Journal of Experimental Zoology.*

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ARCHAEOLOGY

Iron Blade Found Millenium Older Than Iron Age

Oriental Institute's Discovery in Mesopotamia Is Likened To Imagined Finding of Aluminum Saucepan in Dark Ages

STONE, bronze, iron has been the cultural sequence of the materials that archaeologists have found used for tools in the early ages. Iron is a relatively modern metal.

There is little wonder that a discovery made in the course of one of the many expeditions of the University of Chicago's Oriental Institute has created surprise among both archaeologists and metallurgists. For iron, worked by human hands and fashioned into a blade, iron that had not fallen heaven-sent as a meteorite, has been found at Tell Asmar in Mesopotamia among bronze objects that date from 2,700 B.C.

This is a thousand years earlier than iron has been known hitherto to have been used for tools and weapons, and it is some 1,400 years before iron came into common use in about 1,300 B.C.

It is as though an aluminum saucepan had been discovered in the Dark Ages.

In a Tell Asmar temple, dedicated to Ab-u, the Lord of Vegetation, the Oriental Institute's Iraq expedition directed by Dr. Henry Frankfort found a jar brimful of copper objects. There were bottles, lamps, strainers and daggers or meat-knives.

Every object, save one, was complete when it was recognized that the ages had decayed the bone knobs and wooden bodies of the knife-hilts. That one incomplete object was a dagger handle, in openwork technique, and it was without a blade. Dr. Frankfort reasoned that either a bladeless dagger was put into the jar, which was unlikely, or that the blade must have decayed. Only one metal, iron, can disappear almost completely. Yet this was centuries before iron was known to be used.

Prof. Cecil H. Desch, the eminent metallurgist of the National Physical Laboratories of England, was consulted. In the slot of the handle there was wedged a fragment of the original blade. Analysis showed it to be rusted iron, converted by long contact with the earth into a hard, magnetic, crystalline mass. Without doubt the blade was of iron.

More important, the iron was not of meteoric origin. It contained no nickel as meteorites do and therefore it must have been won from the earth by some early iron-maker.

This fragment therefore becomes of first importance in the history of ancient metallurgy. In the Royal Tombs of Ur there was found a small axe of iron which Dr. Desch was able to show had been forged from a meteorite. Other iron objects of early date have also been proved by their high content of nickel to have been made from meteorites.

One of the first examples of worked iron known is the dagger sent by a Hittite king to Tutankhamen but this is a thousand years closer to the present than the iron knife just discovered.

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LINGUISTICS

Map Shows Sixty Dialects of Mexico

THE FIRST reliable language map to be made of Mexico, which will show where the nearly sixty indigenous tongues and dialects are now spoken in the country, is nearing completion. It is being prepared by Miguel Mendizabal, ethnologist of the Mexican National Museum. The data are from the general census taken in 1930, which was the first time in the history of Mexico that data on native races were scientifically gathered.

Comparison with a less accurate linguistic map made by Sr. Mendizabal from earlier and more incomplete data from the 1920 census nevertheless shows certain general facts. Indian racial movements are still taking place. For instance, Aztecs on the southern coast of Oaxaca have been largely replaced by Zapotecs in recent years, the reason not being one of racial superiority, but sudden Zapotecan profit in shrimp fishing.

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