



An Ancient Aristocracy

THE OLD BYWORD "as crazy as a cockroach," is not nearly so old as the cockroach family. As a matter of fact, if primogeniture counts for anything, the cockroach outranks all living insect families except the dragon-flies, for he was here on earth when coal was in the making. Fossil cockroaches have been found in the coal measures, differing little if at all from their modern descendants. Contemporaneous with these early roaches was a most curious insect with six wings, which must be regarded as the great-granddaddy of all insects so far as we have any records. This hexapterous ancestor has long since been gathered to his fathers—whatever they were—but his eldest offspring, the dragon-flies and the cockroaches, still survive.

It may occur to some, who know the cockroach only as an annoying domestic pest, to wonder how these insects got along way back in the hundred-thousandth millenium before kitchen sinks and drain-pipes; but even today the majority of cockroaches are forest dwellers. There are a great many species of them, and they are found almost "from Greenland's icy mountains to Patagonia land." Almost all the wild species are winged, though they do not fly very much.

It is hard to understand why the cockroach should be considered so repugnant an animal, while the ant, which is even a worse pest, suffers no particular stigma. Contrary to popular belief, the cockroach is a cleanly insect, both in feeding habits and in the care of its personal appearances. Its presence does not necessarily indicate slack house-keeping, but merely the misfortune of a damp cellar.

Science News Letter, January 14, 1933

ZOOLOGY

Rabbit and Rat Embryos Are Grown in Laboratory

RECENT scientific romances, especially in England, have visioned a future human society in which babies will be produced in glass vessels in the laboratory. There is no prospect whatever of the practical realization of this process of "ectogenesis," as it was called, but something like initial stages of it in lower animals was reported from three different laboratories at the meeting of the American Society of Zoologists.

Dr. A. J. Waterman of Brooklyn College removed young rabbit embryos in extremely early stages of development from the bodies of their mothers, and planted them upon suitably prepared artificial media. This artificial food material was not even from rabbits, but partly from chickens and partly from rats. The young embryos lived for several days, and advanced several stages in their bodily development.

Drs. J. S. Nicholas and D. Rudnick of Yale University transplanted rat

embryos of from five to twelve days' development onto the embryonic membranes in incubating eggs, thus making the developing chicks, even before hatching, a sort of foster-parents of the alien animals. The younger the rat embryos the poorer the success of the grafts, but enough of the older ones "took hold" to make the experiment a success. Notable in these grafts was the normally rapid development of the nervous system.

Dr. Margaret R. Murray of Columbia University, made tissue cultures of rat skull bones taken from embryos in the fourteenth to sixteenth days of prenatal development. In the rat, the hardening of these bones usually begins with the seventeenth day. This ossification occurred in the bones growing in the laboratory glassware just as though they had still been attached to their original embryo bodies within the mother.

Science News Letter, January 14, 1933

PSYCHOLOGY

Babies Behind Glass Plate Tested to Learn Behavior

WHAT DOES your baby do if he can't get what he wants to get, or can't go where he wants to go? Does he "get mad and quit," or actively and persistently set about solving the disagreeable situation?

The emotional type of a very young child, as well as his physical activity and his mental keenness, can be determined scientifically by purposely putting him in such a situation and then seeing what he does about it. Such a test was described to the American Association for the Advancement of Science by Miss Elizabeth DuBose Price, of the Normal Child Development Clinic of the New York Babies' Hospital.

Miss Price puts the baby to be tested into an inclosure, one side of which consists of a strong glass plate. Outside of the plate she puts a toy or something else that the baby will want, or

she leaves a door open, offering the youngster a chance to "run away," which any parent will testify is a favorite pastime with children. The plate is low enough for a creeping infant to reach over and get the toy; low enough also so that a toddler able to stand can climb over it. Then she leaves the situation up to the baby.

Some of the babies, she has found, successfully work out the problem for themselves without emotional fuss. Others become so wrought up that they cannot control their movements, and so are left baffled. And some become so engrossed in getting over the barrier that they forget what they are doing it for, and have to be reminded. One infant was so intent on running away that it deliberately fell over the low glass wall, although falling is a rather terrible experience for such young children.

Science News Letter, January 14, 1933