

to have little permanent impact on mental capacity.

Nor does an unhappy family life usually cripple the girl's mental capacity. "There seems to be some kind of genetically determined sex difference in the extent to which these conditions influence later intelligence," Dr. Bayley observes.

"The female of the species tends to return somehow to an innate potential." But male intelligence, tied more closely to personality development, is influenced by events, for good or bad.

Dr. Bayley's group recently found, for example, that a girl's intelligence may be measured with some reliability in the first year of life, solely on the basis of early attempts to speak. Boys cannot be so measured. ♦

#### MISSING LINK

### Most Ancient Ant

The earliest known traces of social life among insects have, until now, been dated at about 60 million years ago. There is such a wide range of fossils from this period, however, that entomologists have long believed that earlier species must link the known, social, primitive ants to their apparent ancestors, certain kinds of nonsocial wasps.

**Preserved in amber**, along the shore of Raritan Bay on the New Jersey coast, two worker ants have been

found that push the beginnings of insect social life back to 100 million years ago—the age of the amber that trapped them. Their species has been named *Sphecomyrma freyi*; *Sphecomyrma* means "wasp-ant," while *freyi* is a tribute to Mr. and Mrs. Edward Frey, two amateur mineral collectors who discovered the specimens. In general, the head of the new species is like that of a primitive wasp, while the body resembles a primitive ant.

Just how "social" the new species was is not known, though the wasp from which it apparently descended did not live in colonies as most of today's wasps and ants do. However, the two new specimens have metapleural glands on their bodies that are characteristic of living ants. Just what these glands do is uncertain, but they may relate to chemical communication among social insects.

The scientists who determined the importance of the new species, Profs. Edward O. Wilson and Frank M. Carpenter of the Harvard Museum of Comparative Zoology and Dr. William L. Brown Jr., of Cornell University, had an advance "vision" of what such a missing link would look like. As it turned out, their prediction was almost right on the thorax. The only error came from the belief they held that the antlike mandibles evolved before the narrow ant "waist"; *Sphecomyrma* had developed the slim waist, but still retained the primitive wasp's

head. In general, the scientists report in *SCIENCE* (Sept. 1), the species is close enough to its primitive ancestor that it may be close to the beginning of insect social life.

**Now the scientists** hope that the many people who have been gathering amber from the area for years will make it available to scientists for study. Amber, fossilized resin from certain trees, is often rich in entrapped insects, but not enough of it reaches the laboratory. The substance is fairly common along the seacoasts of Maryland, New Jersey, Long Island and parts of Massachusetts, and has been collected for more than 150 years. ♦

#### FROM GERMANY

### Nuclear Power Go-Ahead

West German power companies have decided to go ahead with two nuclear power station projects in the 600 megawatts plus electrical output class, to be built by the German reactor industry.

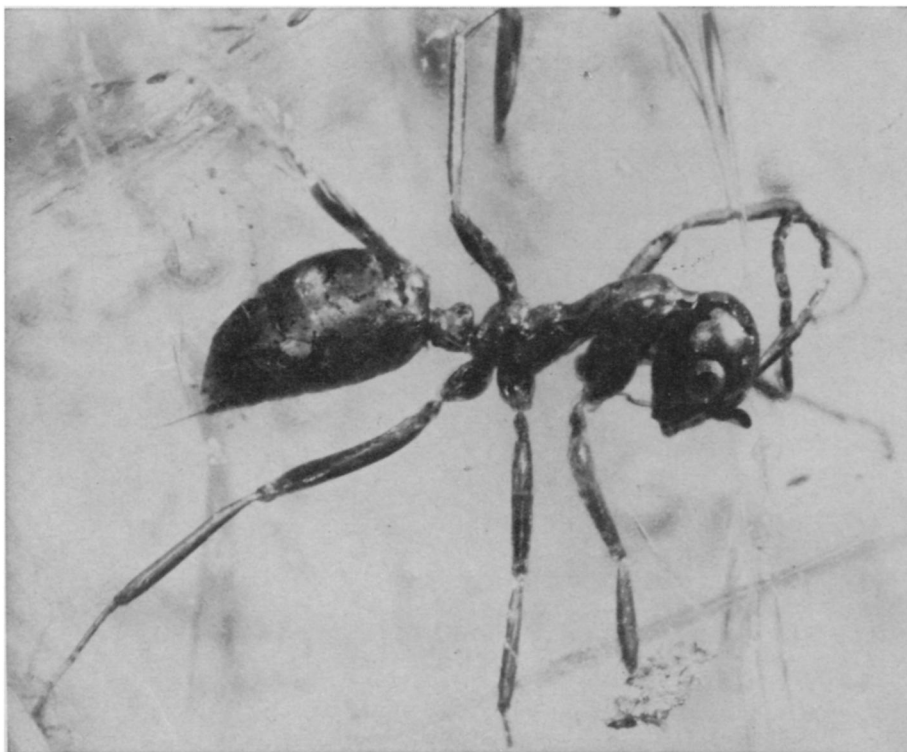
The projects, both in Northern Germany, are a pressurized water reactor, to be supplied by Siemens, which will be built at Stadersand for a group including Nordwestdeutsche Kraftwerke; and a boiling water type at Wuergassen, on the River Weser, to be built by AEG for a member of the Veba Group.

The two power stations are supposed to be working by 1972.

Compared with the U.S. and Britain, Germany has been relatively backward in the application of nuclear energy although research in advanced types has been pushed. The only station of any size to be operating is that at Grundremmingen on the Danube, which came on power with an electrical rating of 232 megawatts last December. Grundremmingen was built by AEF to the boiling water concept and is the world's biggest station of that kind.

The slow German start is only partly the result of restrictions placed upon German nuclear research after the war. Government financial support has been restricted, though Dr. Gerhard Stoltenberg, Minister of Science, avoided any further cuts being made in the current economy drive in Bonn.

A coal crisis has also had adverse effects upon German power going nuclear. Tax incentives are offered to ensure that a certain quantity of coal is burnt in power stations and industry itself is frequently torn between the contending claims of coal and other forms of energy. ♦



Harvard

From New Jersey, a 100-million-year-old ant-wasp, oldest social insect.