

monomorphic (one form) (example: the Argentine ant *Iridomyrmex humilis* (Mayr)). When workers within a single species display two distinct sizes and structures, we say the species is dimorphic (two forms) (example: *Pheidole dentata* (Mayr)). When the workers within a species are of varying size and structure, from small through intermediate to large, the species is termed polymorphic (many forms) (example: the black carpenter ant *Camponotus pennsylvanicus* (DeGeer)). The function of the worker is to construct and repair the nest, feed the immature and adult ants of the colony including the queen, care for the brood, and defend the nest. Formerly it was thought that workers seldom, if ever, laid eggs. If they did so, the eggs, being unfertilized, would, as in the honey bee, develop into males. Recent evidence appears to indicate that workers of most, if not all, ant species lay eggs, and that the eggs of at least some species can produce workers and females, as well as males. However, our knowledge of this subject is very limited and much more study is needed.

Ants have four developmental stages: Egg, larva, pupa, and adult. The egg is almost microscopic in size, varying in shape according to the species. It may be spherical, broadly elliptical, or cylindrical. On hatching, it produces a soft, legless larva. The larva may also vary in size, shape, and pilosity according to the species. One of the most common forms is more or less translucent, gourd or squash-shaped, with the head borne at the narrow end. In shape, the pupa resembles the adult that it is to become, but differs from the adult in being soft, unpigmented, and lacking in power to move from place to place in response to warmth, light, and humidity. In some species of ants, all of the pupae are naked; in others, the pupae are borne in cocoons spun by the larvae; and in still others, the pupae are both naked and enclosed. The cocoons are papery or parchmentlike. When an individual within a cocoon transforms to the adult, it may emerge without help, or it may require assistance by the workers. Queen pupae are the largest of all, and can be immediately recognized by their unusually large thorax and abdomen, the former bearing wing pads. Male pupae, which are somewhat smaller than queen pupae, can be distinguished by their wing pads and protruding genital appendages. Worker pupae are the smallest of all, and resemble adult workers except for their pale color, soft body wall, and incapacity to move about.

The adult, after emergence, may require a few days to attain complete maturity. While lacking full body color and hardness of the body wall, the ant is commonly known as a "callow." Frequently, 6 weeks to 2 months or more are required for development from the egg to the adult stage, the time depending largely on the season of the year and the temperature.

There are a number of ways by which ants may establish new colonies. One is a process known as splitting or budding, in which a fertilized daughter or queen leaves the parental nest accompanied by a number of sister workers who aid her in establishing and carrying on the functions of a new colony. Such a process is common to the legionary ants, *Neivamyrmex nigrescens* (Cresson) and *N. opacithorax* (Emery). Another way is a form of temporary parasitism, in which a fertilized female or queen of one species seeks, and may obtain, adop-