

in the dirt of the den or lair. After two weeks they spin a cocoon and pupate. They remain in this dormant condition for approximately two more weeks before emerging as adults, ready to hop on to a suitable host body. So for at least the first month of its life a flea is cut off from its host species. It is clear from this why a nomadic mammal, such as a monkey or ape, is not troubled by fleas. Even if a few stray fleas do happen on to one and mate successfully, their eggs will be left behind as the primate group moves on, and when the pupae hatch there will be no host 'at home' to continue the relationship. Fleas are therefore parasites only of animals with a fixed home base, such as the typical carnivores. The significance of this point will become clear in a moment.

In contrasting the different ways of life of the carnivores and the primates, I have naturally concentrated on the typical open-country hunters on the one hand, and the typical forest-dwelling fruit-pickers on the other. There are certain minor exceptions to the general rules on both sides, but we must concentrate now on the one major exception-the naked ape. To what extent was he able to modify himself, to blend his frugivorous heritage with his newly adopted carnivory? Exactly what kind of an animal did this cause him to become?

To start with, he had the wrong kind of sensory equipment for life on the ground. His nose was too weak and his ears not sharp enough. His physique was hopelessly inadequate for arduous endurance tests and for lightning sprints. In personality he was more com-, petitive than co-operative and no doubt poor on planning and concentration. But fortunately he had an excellent brain, already better in terms of general intelligence than that of his carnivore rivals. By bringing his body up into a vertical position, modifying his hands in one way and his feet in another, and by improving his brain still further and using it as hard as he could, he stood a chance.

This is easy to say, but it took a long time to do, and it had all kinds of repercussions on other aspects of his daily life, as we shall see in later chapters. All we need concern ourselves with for the moment is how 29