

The hypothesis that animal protein is a limiting factor on human populations in the Amazon and derivative hypotheses are critically analyzed through a historical review of studies on the cultural ecology of the Amazon. After reviewing the animal protein hypothesis as well as the arguments and evidence offered by the critics, it is concluded that the hypothesis is probably valid, although it has yet to be proven or disproven. Less convincing are several hypotheses derived from the animal protein hypothesis which attempt to explain cultural phenomena, such as aggression among the Yanomama, faunal prohibitions, and intra-village sexual politics. Nevertheless, all of these hypotheses have substantial heuristic value.

Four additional points are developed in support of the animal protein hypothesis. (1) The behavioral and ecological attributes of mammalian prey diminish their availability to the human predator. (2) In contrast to other top carnivores, because of its unique combination of large body size and large group size the human predator places exceptionally high demands on the prey species in its range. (3) The human predator has no monopoly on prey species since various carnivores compete with the human predator. (4) In many areas the availability of animal protein is substantially decreased by the dispersal of fish and game with river flooding during the wet season.

The author's analysis of various explanations of faunal taboos leads to the formulation of the concept of transcultural adaptation. This is defined as the net effect of the interaction of several cultures with each other and their environments.

THE HUNTER AND THE HUNTED IN THE AMAZON:
AN INTEGRATED BIOLOGICAL AND CULTURAL
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HUMAN PREDATION

SPONSEL, LESLIE ELMER, PH.D.
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An integrated biological and anthropological approach is developed at the theoretical and methodological levels for the study of human predation. This provides a focus for defining the ecological niche of a human population. In this manner an ecological perspective, instead of the usual evolutionary orientation, is applied to Thomas Huxley's question of "man's place in nature."

This integrated approach is implemented in two ways through (1) a critical analysis of the Amazonian literature on human predation, cultural ecology, the animal protein hypothesis and derivative hypotheses, and (2) field research with Sanemá, a northern group of Yanomama in the Venezuelan Amazon. Field methods are drawn from aspects of ethology, animal ecology, ethnoecology, cultural ecology, and ethnography.

The effective environment of the human predator in the Amazon is defined through an analysis of the forest ecosystem and its mammalian fauna. The analysis includes an examination of several attributes of each prey species that are determinants of their availability and vulnerability for human predation: biomass grade, social life, temporal habit, habitat, trophic specialty, and reproductive potential. On this basis, it is predicted that peccary are the most accessible mammalian prey. This prediction is supported by field research on Sanemá predation and comparative data from the literature.

A special questionnaire for the study of human predation was designed and tested in the field. It covers the interplay of the predator and prey in the temporal and spatial dimensions of the predation process. The application of this questionnaire provides documentation of the successive phases of the typical predation episode in which the Sanemá hunter is viewed as an integrated biological, cultural, and intellectual being. The predation strategy of the Sanemá is generalized, opportunistic, and solitary. It emphasizes predator mobility and the auditory detection and attraction of prey. The group hunt for peccary is the only major exception to this characterization. The hypothesis is formulated that overnight hunting camps function as a compromise between sedentary and nomadic existence, that is, they offer a temporary alternative to settlement relocation as game is depleted in its vicinity.