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INTRODUCTION

The present osteological study of extant populations of the genus *Gopherus* is the first of several intended to treat both Recent and fossil populations. It has two purposes: (1) to determine the systematic relations of these populations to one another, and (2) as a basis of comparison for studies of the earlier fossil members of the genus.

The earliest known geologic occurrence of the genus is in Lower Oligocene rocks of the White River Formation in Colorado, Nebraska, Wyoming, and South Dakota (*Gopherus laticunae* and *Gopherus praextans*). From that period to the present the fossil history is unbroken, although the relationships of the extinct populations to one another are not clear. What is certain, however, is that the genus *Gopherus* is closely related to the extinct genus *Stylemys*. This is based on certain features of the shell and skull (Williams 1950a; Hay 1908). The most important correlative character is the presence of a median premaxillary ridge, which is found only in these two genera of land tortoises. The presumed phalangeal differences between these genera mentioned by several earlier workers has been shown to be incorrect (Auffenberg 1961). However, certain differences in rate of shell ossification during ontogenetic development and the shape of particular parts of the skeleton in adults seem sufficiently great to consider these two related phyletic lines distinct at