

and show large eyes and other specializations for the arboreal or subarboreal lifeway that we know they follow.

We see that *Odontomachus* has attained a larger body size on the average, and tends to occupy the exposed ground-surface and arboreal adaptive zones (foraging fields, and to some extent nest sites) more than it does the hypogaean and other cryptic ones. Both genera have achieved a wide distribution in the tropics, and both have spread into the temperate zones of the earth to a modest extent north and south, with *Odontomachus* having a slight edge in this respect in most countries. Looked at in one way, we can view *Odontomachus* as a secondary radiation and dispersal of the *Anochetus* stock based on the general-adaptive improvement of mandibular-action mechanics, and perhaps other traits that we do not yet appreciate.

Among the species groups of *Odontomachus* we can hypothesize that the *haematodus* group represents the most recent radiation of the genus. The derivative nature of this group is given away by its loss of a single segment from the labial palpi, lowering the primitive number of palpomeres from 4 to 3. That this loss occurred only once in the genus is suggested by the core similarity of the constituent species in other respects (broad head, short antennae, stout mandibles, shape and sculpture of petiolar node, etc.). The *haematodus* group has most of its species (19) in the New World, but in Africa one of the two species (*troglodytes*) belongs to it, while *O. simillimus*, the most common and widespread member of the genus in the Indo-Pacific area, represents it there. *O. troglodytes* and *O. simillimus* are rather weakly differentiated sibling species close to *O. haematodus* itself and to *O. bauri*, so one is tempted to think of the *haematodus*-group radiation as being South America-based.

The conclusion that there has been a substantial radiation of the *haematodus*-related stock in tropical America is inescapable, but that does not necessarily mean that *troglodytes* and *simillimus* are derived from American ancestors. An alternative hypothesis is that these two species, perhaps together with *O. haematodus*, represent an «apical growing point» of evolution for the genus. In terms of general-adaptive evolution, either *troglodytes* or *simillimus* might even represent the «point of the point». Following this line of reasoning, we could explain the American radiation of the *haematodus* group as successive specializations of an invading pre-*haematodus* stock against relatively weak competitive resistance from already-established older lines represented there today by specialized or geographically localized species such as *O. hastatus*, *O. bradleyi* and *O. mormo*. These 3 species possess 4-merous labial palpi and other characters of body build, sculpture and nodal form that link them more closely to the Old World groups of *tyrannicus*, *saevissimus*, *infandus* and *assiniensis* than to *haematodus*-group members now co-existing with them in South and Central America.

Taken all together, the pattern of occurrence of *Odontomachus* over the earth shows an apparent Darlingtonian (post-drift) succession of evolutionary and distributional waves. The successional series seems most nearly complete today in the Indo-Australian region, where the *tyrannicus* and *saevissimus* groups represent specialized relicts of an early radiation, the *infandus* and *rixosus* groups represent the next wave or waves, and the *ruficeps* group (in Melanesia and Australia) and *assiniensis* (in Africa) represent a still later wave, ancestral in its turn to the *haematodus* group wave. In the New World, *O. mormo* may correspond to the first wave, *O. hastatus* to the same or another early one, and *O. bradleyi* to the Old World *infandus*-group wave.