(*Continued from p. 950*)

Ano-dorsal fin formula. Adult specimens collected by Frost in Kenya have shown that this character cannot be used alone to distinguish between even adult *A. n. labiata* and *A. mossambica*, although *A. b. bicolor*, the 'short-finned eel', is immediately recognizable by this method and is not represented in the present material. Figures for this character are given in Table 1.

Vertebral counts. In both the Tana and the Sabaki specimens the vertebral counts are rather low. Thus Barnard[6] considers 100–105 normal for *A. mossambica*, and Frost (*in litt.*) 107–115 for *A. n. labiata*. But even with X-ray photographs, such counts are difficult in the smaller specimens and an error of two or perhaps three vertebræ is possible.

The eighteen Tana River elvers have been referred to *A. n. labiata* and the single Sabaki River elver is considered to be *A. mossambica*, the first true elver to be recorded in Kenya. There is no doubt from the abundance of adults in the river at certain times of the year that elver and post-elver stages must migrate upstream in considerable numbers, and further observations at the Merilla Barrage and the construction of an elver trap on the Ragati River (Tana system) at our Inland Fishery Research Station should reveal much of interest.

We are grateful to Dr. W. E. Frost for additional adult measurements and for helpful comment on these observations, and we are especially indebted to Dr. Geoffrey Kelham, of Nairobi, for some strikingly successful X-ray photographs of these difficult small subjects.

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'Bat Erosion' at Niah Great Caves

AT the Great Caves of Niah, Sarawak, West Borneo[1], there is a relatively soft coral limestone of Miocene date in which these vertical cavities are common, and as in Trinidad[2], found where there are no stalactites. On the other hand, the rock in these places is damp and there may often be a ring of very slowly forming drips around the mouth of a cavity. Moreover, only small family groups of *Miniopterus witkampi* regularly use these sites as roosts, rarely more than five at once, hanging in a bunch from the top-dead-centre[3]. It is doubtful whether the scrabbling action of these small bats could ever excavate such cavities, and indeed the remarkable symmetry and the vertical axis of each formation suggests that it is due to solution rather than the activity of bats.

Nevertheless, at least two species of bat at Niah are responsible for erosion of different sorts in the cave. The small *Hipposideros galeritus* (a roundleaf horse-shoe bat) roosts singly and there are certain spots on the cave wall where a bat may be found every day. Here the action of the bats' claws keeps a small area of the surface rough and free from the slimy coating that covers it elsewhere in the deep interior. This roughened patch is often slightly concave, perhaps worn by mechanical erosion.

More positive is the effect of the huge, densely massed colony of *Cheiromeles torquatus* (the naked bat), which occupies a large gallery at one of the highest points of the roof. Fragments of rock quite often fall from this site and are deeply eroded and heavily stained with the bats' excrement. Presumably chemical action weakens the limestone until it breaks under its own weight or under the burden of a *Cheiromeles*, which weighs about six ounces.

Examination of the bat-remains recovered at mid-palæolithic levels in the 1958 Niah dig prove the presence of both *H. galeritus* and *Cheiromeles* at levels corresponding to an age of well over 40,000 years[4], as well as other bats no longer found in the cave[5]; so that, if occupation has been continuous, both these species have had plenty of time to leave their mark.

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Galeal Structure in Adult Mosquitoes

IN a previous communication[1], studies of the finer structure of the galeæ in adult mosquitoes were reported. It was pointed out that the galea formed the functional maxilla and typically consisted of a strengthening chitinous rod with a fine outer lamella the tip of which carried a number of variously shaped teeth. Further studies, ranging over eight genera of mosquitoes of the Ethiopian region, have revealed that although there is a variety of morphological types, a progressive reduction in the outer lamella is evident. It should be noted that generic and specific differences in the mouth parts of adult mosquitoes have only been poorly investigated[2], and early studies described only general morphological differences in the trophi, usually of species of known medical and veterinary importance[3–5]. In the present studies, freshly killed mosquitoes were used whenever possible and the heads were soaked in 5 per cent potassium hydroxide for 48 hr. After this they were transferred to a slide, the trophi teased apart with a fine steel point and mounted in polyvinyl alcohol. General examination was carried out at $\times 100$ and detailed examination at $\times 450$.

It has been found that there are four main types of galeal structure which are shown diagrammatically in Fig. 1. Type *A* has a well-developed outer lamella with the distal portion expanded and typically small teeth without pointed tips. Type *B*, which has a simple blade-like appearance, is the commonest form found and the teeth are subject to wide variation in both form and number although the greater proportion are elongate with pointed tips which extend beyond the outer margin of the lamella. Type *C* has the terminal region of the lamella reduced, but this is