

of part (a) of Table I at draw ratio three and of parts (b) and (c) at draw ratio four, however, only two filaments were studied.

When appropriate statistical consideration is given the results, it is observed that the effect of specimen preparation is greatest at draw ratio one and becomes less important at the higher draw ratios. Flattening induces considerable parallel dichroism of all the four absorption bands at draw ratio one, and this effect is much greater than that caused by microtoming plastic-embedded filaments in a direction perpendicular to the filament axis. Some perpendicular dichroism appears to be induced at draw ratio one when the microtoming is done in a direction parallel to the filament axis.

The dichroic behaviour of the $3,310\text{ cm.}^{-1}$ band (N—H stretching) is identical with that of the $3,080\text{ cm.}^{-1}$ band (presumably N—H stretching). The two methylene-group stretching motions at $2,925$ and $2,860\text{ cm.}^{-1}$ exhibit nearly the same dichroic behaviour, and the extent of their dichroism is generally less than that of the two N—H stretching motions. With these filaments, there is no reversal of dichroic character in going from draw ratio two to higher draw ratios, as was observed by Quynn and Steele¹. The results suggest a random arrangement of nylon polymer chains at draw ratio one, with increasing drawing causing increasing alignment of these chains with respect to the filament axis.

The results of X-ray diffraction studies carried out on these filaments are consistent with those of the infra-red measurements. It is suggested that the parallel dichroism found for the four nylon absorption bands at the lower draw ratios by Quynn and Steele¹ was caused by the mechanical flattening procedure they used to obtain suitably thin specimens.

The experiments discussed here will be reported in greater detail elsewhere.

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¹ Quynn, R. C., and Steele, R., *Nature*, 173, 1240 (1954).

² Fraser, R. D. B., *J. Chem. Phys.*, 21, 1511 (1953).

Biological Research in East Africa

In the account, entitled "Zoonoses in East Africa", of the conference held earlier this year in Kampala by the East African Medical Research Scientific Advisory Committee (see *Nature*, March 3, p. 406), it is stated (p. 407, col. 1) that "it is regrettable that in East Africa so little collecting is being done". Contrary to this statement, the Coryndon Museum, Nairobi, has hundreds of thousands of specimens and receives two thousand specimens monthly. A few lines further on, the article says, "it is difficult to get birds, mammals or insect identifications done in East Africa". Again, contrary to this statement, the Coryndon Museum, Nairobi, under Dr. L. S. B. Leakey, the curator, can do all this and, more to the point, has type specimens.

For birds, the Coryndon Museum has a first-class ornithologist and the finest collection of East African birds anywhere. We have now the two volumes of "The Birds of Kenya" by Mackworth-Praed and Grant. The Museum has a very fine and extensive collection of insects and a first-class entomologist,

while the small mammals are rapidly being built up under the mammalogist. The same applies to snakes. The Botany Section is just as good, while the Palaeontological and Archaeological Sections are known all over the world. Again, the Fish Division of the Kenya Game Department has a very great knowledge covering the past twenty years on these matters and has published a great deal of it. The Jinja Fisheries Research Station has begun publication of "The Fresh Water Fishes of Uganda", and Kenya also has ready the manuscript for a like book on the fresh-water fishes of the Colony. With reference to the marine fishes, this is the work of Prof. J. L. B. Smith, and shortly to appear is a publication covering marine fisheries of Kenya. The Natural History Society of Kenya has published a report on the "Fauna of Tanganyika"; and its volumes are full of such papers. This brief list shows that the information exists, and work is being done.

The need for faunal surveys in the Colonies has been realized for at least the past twenty years; but we have never had the money, and unless this is forthcoming, these surveys cannot be undertaken. We work in co-operation with the British Museum and with their specialists, and rightly so; and get much help from them. However, the crux of the matter is that there is no co-ordination between the various services in East Africa and the scientific workers there. This lack is proved by the article describing the conference. It is one of the most serious problems in East Africa. Scientific officers work in isolated places, cut off from associates both in a Colony and with men working on the parallel problems in other Colonies. There is no free exchange, either oral or written, of work being done or even written reports of work being done, and although heads of scientific and development departments realize this, yet very little has been done to make things easier. I speak from many years experience of Africa.

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No one would wish to fail to acknowledge the work being done at the Coryndon Museum: the difficulties under which the Museum labours are brought out by Mr. Copley in his final paragraph. Formal surveys of the type asked for have not, in fact, been possible. They were called for at the Kampala conference by East African biologists. It was these same East African biologists who spoke of the difficulties they encounter in getting birds, mammals and insects identified. It is perhaps significant that the more confident note was struck by a visiting American speaker; but he was referring to the British Museum. All concerned in biological and medical work in East Africa would be happy to see the staff of the Coryndon Museum in a position to afford the services so urgently called for. The organization of the conference was itself an effort to overcome the isolation and lack of contact which Mr. Copley mentions.

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