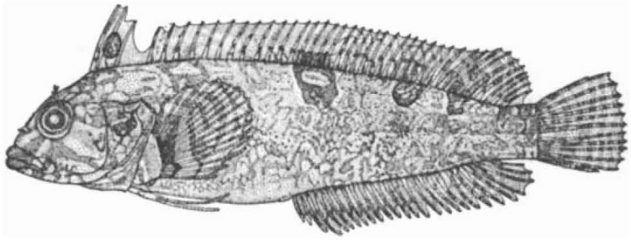
klipfishes (but as clinids to the academic). The South African forms are most closely related to those found in southern Australia, New Zealand and South America, although the family Clinidae is also well represented on the Pacific coast of America and in the Caribbean, the tropical Atlantic and parts of the Indian Ocean, while one enigmatic species *Clinitrachus argentatus* is found in the Mediterranean. On the South African coast, however, they reach a peak of abundance and diversity of species, forming a group which is typical of the colder Cape waters and which is becoming a characteristic element in the fauna. K. H. Barnard (*A Pictorial Guide to South African Fishes*, 190, Cape Town, 1947) wrote that *Clinus robustus*, which grows to 31 cm long, was a good table fish, while J. L. B. Smith (*The Sea Fishes of Southern Africa*, 350, Cape Town, 1961) acknowledged them as good sporting fish for the juvenile angler.

The greatest interest of the clinids lies, however, in their speciation, the ecological relationships within the group, their systematics, and above all their kinship to clinids elsewhere and the bearing this may have on zoogeography. The greatest stumbling block to the study of the klipfishes has been the confusion in systematic studies. The last revision was that of J. L. B. Smith (*Ann. Mag. Nat. Hist.* (II), **12**, 535; 1945), who recognized fifteen genera (six of them new) of which seven were monospecific. This classification was later modified by Smith himself and by others. A recently published revision "The Systematics of the Fishes of the Family Clinidae in South Africa" (*Ann. S. Afric. Mus.*, **55** (I), 1; 1969) by Mary-Louise Penrith promises to provide a more acceptable and better balanced working tool for the further study of these fish.



Clinus superciliosus, the most abundant of South African clinids.

The intensive collection of intertidal fishes undertaken by the staff of the South African Museum since 1962 has made it possible for Dr Penrith to examine fresh specimens of twenty-eight of the thirty-three species she recognizes. The generic arrangement veers away from the "splitter's" monospecific genera, which can only serve to obscure systematic relationship, and only five full genera are recognized, two of which contain most of the species described.

This new systematic treatment makes some comparison possible with the well-studied clinids on the American Pacific coast, and consideration of intrafamilial relationships becomes permissible. The subfamily Labrisominae, chiefly American, is seen to have an Atlanto-East-Pacific origin while the Clininae are Indo-West-Pacific. The common stock which gave rise to both groups may have been a tropical Tethys Sea group, already partly differentiated before climatic conditions changed. The now apparent need for studies of the Australasian and particularly the Asiatic forms may throw further light on the zoogeography of this group.

CONTRACEPTION

More Effects of the Pill

from our Medical Biochemistry Correspondent

One beneficial side effect of oral contraceptives has been the stimulus given to the study of the biochemistry of the normal human female. Never before have so many different factors been measured in so many different women. These studies have not always been well controlled but Wynn *et al.* (*Lancet*, ii, 761; 1969) have recently shown clearly that serum triglycerides and cholesterol increase in women taking oral contraceptives. A group of 116 women (group *A*) were examined before and while they were taking oral contraceptives; another forty-eight (group *B*) were examined while taking the contraceptives and again when they had stopped. In both groups there was a highly significant increase in the mean serum triglyceride concentration while they were taking contraceptives —95 per cent of group *A* and 88 per cent of group *B*. In both groups the increase in serum cholesterol was much smaller and only just significant. There was no evidence of an increase in chylomicron triglyceride. The increase was therefore of endogenous triglyceride, and was accompanied by an increase in all the low-density lipoprotein fractions except the S_f 12–20 group.

In an accompanying paper Wynn and Doar say that they found no difference in fasting plasma glucose, but both oral and intravenous glucose tolerance tests were significantly impaired when contraceptives were being taken. Thirteen per cent of those taking the pill for the first time gave reactions characteristic of chemical diabetes mellitus after taking oral contraceptives. Concentrations of non-esterified fatty acid did not seem to be altered, but there was more pyruvate in the blood after tolerance tests in women taking contraceptives. Blood insulin was also increased after glucose had been given to women taking oral contraceptives for the first time. The increase in triglyceride and changes in glucose tolerance could not be correlated with age, obesity, parity or a family history of diabetes, and so it is not possible to identify women who are particularly likely to respond in this way.

Wynn and his colleagues were also unable to correlate their effects with the particular steroids taken, probably because relatively few women were examined. In a study of 797 women taking one or more of thirty-four different oral contraceptive preparations, Grant (*Brit. Med. J.*, **4**, 73; 1969) found a significantly higher incidence of leg cramps and vein complaints in women taking combined preparations containing a relatively high dose of mestranol. Endometrial biopsies showed that highly progestogenic preparations gave rise to an abnormal endometrium with many dilated sinusoids, but leg cramps were associated with stromal condensation.

The complexity of the body's response to oestrogens is further illustrated in the same issue of the *British Medical Journal* (**4**, 82; 1969). An intramuscular injection of hexoestrol proved to be just as good as the normal oral course of stilboestrol for suppressing lactation, but produced a much smaller increase in clotting factor IX in the serum. In practice this should mean that hexoestrol will suppress lactation with less risk of thromboembolic complications than the present treatment. Clearly all oestrogenic compounds do not have the same metabolic effects.