

there is ample room also for similar developments elsewhere. In particular, centres for 'academic' research, complementary to, and co-operating with, Plymouth, would find adequate opportunity for useful work. We have had such a centre in view in planning our development policy here and in preparatory work that has been in progress for a number of years.

In Bangor we are exceptionally favoured, in close proximity to a littoral fauna and flora which, both in variety of habitats and in wealth of interesting species, must be judged to be among the richest in the kingdom. Certainly no other university institution in Great Britain is better provided in this respect at its very doors. Consequently marine biology has always taken a prominent place in our university courses. A vacation course in marine zoology, which draws students from many other universities, has been held annually for the last thirteen years. We have regarded marine biology, moreover, as a subject which should have high priority in the promotion of research in this College.

Much is already known about the fauna of this area, as can be seen from a glance at the pages of almost any standard systematic work on British marine animals—for example, Alder and Hancock's "British Nudibranchiate Mollusca"; moreover, the pioneer work of Sir William Herdman and his collaborators provides a preliminary survey of the fauna. The staff of the Zoology Department has been for a number of years compiling a fauna list from these records and, with the help of a number of visiting workers, has extensively added to it. Though much remains to be done before this list can be regarded as sufficiently complete for publication, we already have a good working knowledge of the principal species and their distribution.

Parallel information on the marine flora has been accumulated by members of staff of the Botany Department, supplementing the earlier records of Prof. R. W. Phillips, whose algological library is housed in the Department. The work done by Phillips and Lloyd Williams created a local tradition which we feel should be maintained.

Prof. Fritsch has stressed the importance of the benthic diatoms. Other components of the microflora may also prove of great importance. The study of the marine microflora is a natural extension of a study of the freshwater microflora of this district which is already being carried on intensively.

Aware of the opportunities our situation offers and conscious of the need for providing special facilities for the study of marine biology in at least one of the constituent colleges of the University of Wales, the Council of this College has included among its principal post-war aims the founding of a marine biological station at Bangor, to serve the needs of academic research and teaching within the Principality. We hope that this might also serve in part the wider need to which Prof. Fritsch has directed attention.

To be reasonably useful and efficient, such a station as we plan would require a team of workers covering the various aspects of marine biology, both floral and faunal. The advantage of founding such a station in close conjunction with our existing departments is obvious, since the staffs of these departments would go some way towards providing the nucleus of a team. We hope, too, that we shall have the co-operation of our colleagues who are interested in

marine biology from the other Colleges of this University.

F. W. ROGERS BRAMBELL.
D. THODAY.

University College of North Wales,
Bangor. Aug. 1.

¹ *Nature*, 154, 144 (1944).

I WOULD like to endorse Prof. F. E. Fritsch's letter in *Nature* of July 29 on this subject. It is regrettable that a country such as ours with many suitable habitats for marine algae should lag behind Continental countries in the study of this particular group of plants. Both the last and the present Wars revived an interest in the marine algae, and the present War has certainly shown how ignorant we still are about many fundamental facts of the life-history of seaweeds. Some of these problems are now being solved and the gaps in our knowledge closed, but it is important that the work should not cease when the War ends. The establishment of a centre for this work is long overdue. At the recent annual meeting of the Marine Biological Association, it was hoped that at least one if not more whole-time workers on marine algae might be appointed at the end of the War. This may well be a start in the direction indicated by Prof. Fritsch.

As regards the establishment of centres outside Great Britain, some time ago I advocated in *Nature*¹ the establishment of a research station in the West Indies with an algologist on the permanent staff. This station I suggested should be administered by British universities. Since then, the Commission on Higher Education has visited the West Indies and it is going to propose the establishment of a university college in the islands. A research station such as I envisaged may well form part of such a college. It remains to be seen what the Commission suggests in its report.

V. J. CHAPMAN.

Botany School, Cambridge.

¹ *Nature*, 152, 47 (1943).

Action of Pepsin on Acylated and Non-acylated Cysteine- (Cystine-) Tyrosine Peptides

IN connexion with some projected immuno-chemical work, we have recently had occasion to synthesize cysteyl- and cystyl-tyrosine and tyrosyl-cysteine and -cystine. Since these peptides represent a type which has not hitherto been available, it was considered worth while to study the action on them and their N-carbobenzyloxy derivatives of crystalline pepsin.

So far the only synthetic substrates known to be attacked by pepsin are certain derivatives of peptides containing tyrosine or phenylalanine and glutamic acid, in which the amino group of the aromatic amino-acid is combined with the α -carboxyl group of an acylated glutamic acid¹. The peptic hydrolysis of these substrates occurs most rapidly at pH 4.0 and scarcely at all below pH 2.0; no hydrolysis of the free peptides takes place and the reaction is further inhibited if the free carboxyl group of the glutamic acid residue is blocked. On the basis of these observations, Bergmann² has drawn the general conclusion that hydrolysis by pepsin is conditional on the absence of a free amino group from the immediate