Table 2

Time (min.)	Hæmolytic rate (per cent)	Diacetyldeoxycholate bound to the cells
0	3	352
5	10	364
30	15	408
60	20	479
225	25	528
390	50	520

In the case of the alkyl sulphates, it was not possible to follow the adsorption-rate with time as the adsorption speed was too high; but in the case of deoxycholate it was possible to relate the time function of adsorption and hæmolytic rate using the same technique (Table 2).

We find evidence here of further development of hæmolysis after an initial rapid adsorption of the main quantity of the diacetyldeoxycholate.

The failure of Ponder to find adsorption of sodium taurocholate in a hæmolytic system can be explained by the recent results of Pethica and Schulman⁴. They found practically no hæmolytic activity for the highly purified compound and the activity was attributed to the accompanying impurities. A constant concentration of the taurocholate before and after the hæmolysis can thus be expected.

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¹ Ruyssen, R., and Croes, R., *Med. Kon. Vlaam. Acad. Wetensch. Belg.*, **12**, 4 (1950).

² Croes, R., and Ruyssen, R., *Bull. Soc. Chim. Biol.*, **33**, 1837 (1951).

³ Ponder, E., "Hemolysis and Related Phenomena" (London, 1948).

⁴ Pethica, B. A., and Schulman, J. H., *Nature*, **170**, 117 (1952).

Swarming of *Nereis succinea* (Leuckart) off the East Coast of Canada

IN June 1952 the crew of a fisheries patrol boat cruising in Miramichi Bay, New Brunswick, observed what they took for a sand-bar in an unexpected situation. On closer inspection they found that there was no such bar, but that the surface of the sea over a wide area was in a state of violent turmoil ("a sort of boiling") due to the presence of enormous numbers of polychaetes. The area covered was some 150 yards in radius and was broken up into several minor patches. The largest one, from which they took a sample of the polychaetes, was estimated to be 75 ft. long and 15 ft. wide, and the polychaetes seemed to extend to about 2 ft. deep. The tide was low at the time and the depth of the water about 7 ft. The bottom consisted of hard mud. The observation was made on a fine, warm day.

The polychaetes involved were the heteronereid forms (both sexes) of *Nereis succinea* (Leuckart). This is the first record of that species from eastern Canadian waters, though it is known from the eastern coast of the United States, usually under the name *Nereis limbata* Ehlers. Ehlers¹ described in detail the male heteronereid of *Nereis acutifolia* Ehlers, which appears to be another synonym of *Nereis succinea* (Leuckart) (cf. Monro²). The specimens from Miramichi Bay agree closely with Ehlers's description.

We know of no other case of the swarming of a nereid with such activity and in such concentrated masses as occurred in this instance, and should be glad to hear of any that has been recorded.

The specimens were submitted by the collectors to Mr. R. A. McKenzie, a representative of the Fisheries Research Board of Canada at Chatham, New Brunswick, and were forwarded by him to Dr. A. H. Leim, of the Atlantic Biological Station, St. Andrews, New Brunswick, who, in turn, sent them to us for identification. We are indebted to the former for particulars of the conditions of swarming.

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¹ Ehlers, E., "Die Polychaeten des magellanischen und chilenischen Strandes", 118 (1901).

² Monro, C. C. A., *Proc. Zool. Soc.*, Pt. 1, 42 (1933).

Factors affecting Choice and Judgment

DR. R. G. Hopkinson¹, in his account of a meeting of Section J of the British Association at Belfast, discusses certain aspects of subjective assessments. While admitting that subjective judgments can be of very real value, it does seem that Hopkinson has under-estimated some of their disadvantages in comparing them with 'objective' methods of measurement.

When subjective and objective methods of measurement can equally well be used, it may well be that, in certain cases, smaller differences can be detected by the subjective method. The 'success' of subjective assessments, however, is generally described in terms of accepted threshold-levels (generally 80 per cent correct), and there may have to be a relatively very large difference between stimuli before they can be distinguished 100 per cent correctly. In fact, a 100 per cent discrimination may be unattainable by subjective methods.

It is above all when absolute judgments have to be made, however, that subjective methods become inefficient. This is because a subjective judgment tends to be affected by others made just previously and, in particular, to be influenced by the average quality-level of the group within which the samples to be assessed are presented. Thus, for example, food products have often to be assessed by experts in terms of mental standards, when it is not possible to keep a standard sample for comparison purposes. In such a situation, Dove² has shown that a sample of sweet corn is described quite differently when presented with groups of samples differing in quality, and Sheppard^{3,4} has shown that absolute judgments for firmness of a given sample are affected by the average firmness of the group within which it is judged.

It is interesting that Hopkinson found little variation in glare settings, since such judgments are likely to be more important biologically to the individual than the type of assessments described above, and it may be for this reason that they are made more accurately. Since fatigue mechanisms usually operate to safeguard the individual from physiological damage, it would be interesting if they could be shown to do so with a greater degree of accuracy than is usual in psychological assessments.

There are, however, other possible reasons for these differences. Thus it may be easier to maintain a mental standard for visual judgments than it is for flavour or tactual assessments; while it seems likely