

seems quite remarkable for it to account for such a large proportion of the variation in tree-growth. No doubt there are other indices or parameters characterizing the general circulation pattern that should do as well or better.

In conclusion, it seems appropriate to endorse the closing remarks of Jones¹ to the effect that the investigation of trends of growth shown by trees over long periods offers a promising field of work for the climatologist studying long-period fluctuations in the world's climate.

U.S. Weather Bureau,
Washington, D.C.

G. W. BRIER

¹ Hustich, I., *Nature*, **160**, 479 (1947).

² Brier, G. W., *Bull. Amer. Meteorol. Soc.*, **28**, 237 (1947).

³ U.S. Weather Bureau and Army Air Forces, "Historical Weather Maps, Northern Hemisphere, Sea Level" (1943-44).

⁴ Fisher, R. A., and Yates, F., "Statistical Tables for Biological, Agricultural, and Medical Research" (London: Oliver and Boyd, Ltd., 1938).

Dissociation Energies

In my recent book¹ there are a few errors and misprints. As it may be a year or two before a second edition is in print and use of the data might lead to errors in other people's work, it seems desirable to record them. I am indebted to Dr. L. Brewer for pointing out these errors. Those for HBr and HI also occur in Herzberg's book².

Molecule	Value given		Dissociation energy		Correct value	
	e.v.	k.cal./mole	e.v.	k.cal./mole	e.v.	k.cal./mole
F ₂	2.2 ± 0.6	72	2.2 ± 0.6	50		
HBr	3.60	83.0	3.78	87.4		
HBr ⁺	3.3	76	3.5	80		
HI	2.75	63.4	3.1	71.6		
HI ⁺	3.24	75	3.6	83		

A. G. GAYDON

Imperial College,
London, S.W.7.

¹ "Dissociation Energies and Spectra of Diatomic Molecules" (London, Chapman and Hall, 1947).

² "Molecular Spectra and Molecular Structure; I. Diatomic Molecules" (New York, Prentice-Hall, 1939).

The Swimming of Dolphins

In reply to Mr. A. H. Woodcock's¹ inquiry whether other observers have seen the 'motionless' swimming of dolphins and what explanations may have been given, I can state that I have seen this phenomenon on several occasions.

One particular instance about which I have notes available occurred on January 6, 1926, in approximately lat. 55° 15' S., long. 39° 05' W. At mid-day seven dolphins, almost certainly of the species *Lagenorhynchus cruciger*, played for some time round the bows of the whaler *Don Ernesto*, making between 9 and 10 knots, course S.W. 1/2 S., weather clear, several tabular bergs in sight. I photographed the dolphins from the bow rollers directly above the animals as they swam immediately ahead of the fore-foot, slipping through the water with no apparent swimming motion. The beauty of this seemingly effortless speed impressed me greatly.

Mr. Woodcock's explanation that 'motionless' dolphins may be riding the bow wave and falling down the inclined surface did not occur to me. I

have always assumed that the forward movement of 'motionless' dolphins must be due to rapid up and down strokes of very small amplitude by the tail flukes, strokes which escape notice because the disturbed surface of the water hinders exact observation. This assumption now appears to be incorrect in view of Mr. Woodcock's observation of a 'motionless' dolphin swimming on its side for a distance of 304 metres with no visible oscillation of the tail.

L. HARRISON MATTHEWS

Department of Zoology,
University,
Bristol.

¹ Woodcock, A. H., *Nature*, **161**, 602 (1948).

References in Scientific Literature

THERE is now increasing use, in scientific literature, of a system in which all references to literature are inserted in the text in the same type. I quote two recent ones: (a) from British literature and (b) from the United States.

(a) "The first step in the breakdown of glycogen is the formation of glucose-1-phosphate and, as shown by Cori and his coworkers (Cori, Cori & Hegnauer, 1937; Cori, Colowick & Cori, 1937; Cori, Cori & Schmidt 1939; Cori, Schmidt & Cori, 1939; Cori & Cori, 1939; Cori, Green & Cori, 1942), this reaction is reversible." . . . "Glycogen has been produced *in vitro* with minced tissues (Kiessling, 1936, 1937; Ostern, Herbert & Holmes, 1939; Ostern & Holmes, 1939), tissue extracts (Cori, Cori & Schmidt, 1939; Cori & Cori, 1939; Mirski & Wertheimer, 1942) and with purified or even crystalline enzymes (Cori *et al.*, 1937; Cori, Colowick & Cori, 1938; Cori *et al.*, 1942; Kiessling, 1939 a, 1939 b; Colowick & Sutherland, 1942; Schäffner & Specht, 1938, 1939)."

(b) "Impairment of the ability of the thyroid to collect or retain radioactive iodine has been reported with thiourea (Keston, Goldsmith *et al.*, 1944; Buciero and Vieira, 1944; Chagas, De Robertis, and Couceiro, 1945), thiouracil (Rawson, Tannheimer and Peacock, 1944; Rawson, Cortell *et al.*, 1944; Rawson, Evans *et al.*, 1944; Couceiro, Vieira and de Moraes, 1944; Salter, Cortell, and McKay, 1945) and promizole (Higgins and Ingle, 1946)."

Surely we are losing sight of the object of the printed paper, namely, that it should be readable. Nowadays it may be somewhat of an athletic feat to pick out the text. It is time that the whole question of references was reconsidered and that the convenience of the printer was not made the main consideration. Even smaller type for the references would be an improvement, or some system which made introductory words stand out.

In this respect contrast the readability of (c) from another British journal.

(c) "the earlier statement that all known heteronuclear mononitronaphthylamines were orange-red required modification in that the 5- and 6-nitro-2-naphthylamines should be styled orange-yellow and golden-yellow respectively^{2, 5-8}. (Since this work was completed, Hertel⁹ reports that . . .)"

(2, 5-8 and 9 are placed in a convenient footnote.)

R. A. PETERS

Department of Biochemistry,
University Museum,
Oxford.
April 15.