occurs when the oil drop is carefully posed; a destructive or disruptive interaction when the drop is impacted. There cannot, therefore, be said to be two 'effects', though the effects differ. Rather two modifications of the same 'effect'.

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¹ NATURE, 131, 691, May 13, 1933.

² NATURE, 132, 317, Aug. 26, 1933.

Crystalline Chlorocruorin

CHLOROCRUIORIN is a respiratory pigment, closely allied to hæmoglobin, which occurs only in the blood of certain polychæte worms^{1,2}. We have now crystallised chlorocruorin, measured the absorption spectrum of the pure substance, and analysed it.

Blood of *Spirographis* from Tamaris was used. Abundant crystallisation occurs at 0° in blood to which ammonium sulphate has been added. The crystals, which belong to the rhombic system, are shown in Fig. 1. Most are pale yellowish green (Fig. 1, *a*), but some are dark brownish green (Fig. 1, *b*) with strong red dichroism.

(a)

(b)

FIG. 1.

The absorption spectrum of an oxychlorocruorin solution made from the crystals resembles that previously described for *Spirographis* blood¹, with differences in the relative intensities of the ultra-violet bands. The third band in the visible at 515 mμ, which is absent in oxyhæmoglobin, is shown not to be due to an impurity.

For analysis several recrystallisations were made and then a solution in water prepared from the crystals was dialysed until all sulphate had disappeared. The chlorocruorin was then precipitated by acetone and dried. The analyses were carried out by Dr. R. J. W. Reynolds, using Pregl methods. The percentage composition of chlorocruorin, compared with that of hæmoglobin, is shown in the accompanying table:

	C	H	N	S	Fe
Chlorocruorin	49.2	7.3	15.4	2.6	1.2
Hæmoglobin	54.4	7.3	16.7	0.6	0.5

The striking differences between the two substances are the higher sulphur and iron contents of chlorocruorin.

There is evidence that the protein of chlorocruorin

is different from globin^{3,4}. Since globin is exceptionally poor in sulphur it is not surprising, then, that chlorocruorin is richer than hæmoglobin in this element.

It has been shown that the iron content of the hæmin of chlorocruorin and that of the hæmin of hæmoglobin are both 8.6 per cent⁵. The high iron content of chlorocruorin compared with hæmoglobin must mean, therefore, that, in the former, hæmatin forms a relatively greater part of the molecule.

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¹ H. Munro Fox, *Proc. Roy. Soc.*, B, 99, 199; 1926.

² *ibid.*, *Proc. Roy. Soc.*, B, 111, 356; 1932: 112, 479; 1933.

³ Jean Roche, *C. R. Soc. Biol.*, 110, 48; 1932.

⁴ O. Warburg und E. Negelein, *Bioch. Z.*, 244, 9; 1932.

⁵ O. Warburg, E. Negelein und E. Haas, *Bioch. Z.*, 227, 171; 1930.

Control of Insects by Trapping Adults

It is becoming generally recognised that it is seldom possible to reduce the numbers of insects by trapping or destroying adults. Most insects have such a high birth-rate that the numbers killed are replaced by other individuals; in other words, the insect community is very elastic, and will nearly always increase up to the limits set by food supply, climate or enemies.

It is, however, quite possible that control of tsetse flies (*Glossina*) may be achieved by killing adults, for these insects have a very low birth-rate. But whether or not the trap mentioned in NATURE of September 2, p. 361, can do this is not yet known; it seems that those who have worked with it have not made series of counts in trapped and untrapped areas. Only in this way can it be proved that traps are reducing the population of 'fly', for these insects are known to be subject to great increases and decreases in numbers apart from any which man may be able to cause.

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Flight of the Black Eagle, *Ictinætus malayensis* *perniger*, Hodg.

THIS fine bird is not uncommon in the hills of Ceylon, where I have seen it fairly frequently. Its habit is to sail close over the tops of the trees of jungle-clad hill-sides, wheeling into ravines and hollows with consummate ease, while it searches for its prey. I have never seen it perched, and the feature of its flight that has particularly struck me is the slowness with which it can sail without any wing-flapping, even when it finds itself in a deep pocket among the trees where it would seem inevitable that it must either crash or extricate itself by flapping flight. It seems to be able to avoid stalling even at what appears little more than walking pace, and certainly at very low speeds.

It occurs to me that this low stalling speed may be correlated with the great extent to which its long primaries are separated while in flight. The accompanying photograph (Fig. 1) is of a drawing which I