general mechanism. However, in detail, these phenomena are certainly different and we therefore consider it desirable to give them different names.

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GENETICS

Immunogenetic Confirmation of the Origin of a Presumed Natural Hybrid between Goldfinch and Greenfinch

A PRESUMED natural goldfinch × greenfinch (*Carduelis carduelis* × *C. chloris*[1]) hybrid was trapped near the town of Parma in September 1960. This bird is the second one captured in these surroundings, the first having been trapped in 1951[2]. The bird answers quite well the description of the goldfinch × greenfinch male hybrids reared in captivity[2]: it has the shape, the size and the heavy, whitish bill of the greenfinch, a small orange mask like the scarlet one of the goldfinch, a yellow wing-bar as in the goldfinch and yellow on the external vane of the primaries as in both of the supposed parental species.

Although, according to Gray[3], presumed natural hybrids have sometimes been reported, absolute certainty of their genetic origin has never been attained. With the aim of identifying beyond doubt the origin of the actual presumed hybrid, an immunological analysis of its red-cell antigens has been made. The inter-relationships of the red-cell antigens of goldfinch, greenfinch and of many other carduelines are well known[4]. Particularly, goldfinch and greenfinch have common antigens and specific ones. According to many researches on F_1 interspecies hybrids, these animals possess both common and specific antigens of the parental species[5].

The red cells of the presumed hybrid were tested by means of anti-goldfinch and anti-greenfinch sera absorbed reciprocally by the red cells of greenfinch and goldfinch, and by the red cells of the presumed hybrid. The immunological technique has already been described[6].

Table 1

Antiserum	Absorbing cells	Test cells: Goldfinch	Greenfinch	Hybrid
Goldfinch	Greenfinch	+	−	+
	Hybrid	−	−	−
Greenfinch	Goldfinch	−	+	+
	Hybrid	−	−	−

+, Agglutination; −, no agglutination.

As can be seen in Table 1, the presumed hybrid possesses in its red cells the specific antigens of the goldfinch (shown by anti-goldfinch serum absorbed by greenfinch red cells) and of the greenfinch (made evident by anti-greenfinch serum absorbed by goldfinch red cells). Besides, the red cells of the presumed hybrid contain the antigens common to goldfinch and greenfinch (clearly shown using anti-goldfinch and anti-greenfinch sera absorbed by the cells of the presumed hybrid).

Finally, the presence together of both specific and common antigens of the goldfinch and of the greenfinch in the red cells of this bird clearly indicates that it is a true F_1 hybrid between these two species, this being the unique genetic combination in which all these antigens can be found together.

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A New Eye Colour Mutation in *Calliphora erythrocephala* Meig

IN the summer of 1960 a variant eye colour appeared spontaneously in a culture of *Calliphora erythrocephala* which was being kept in the Zoological Institute of the Free University of Berlin. Dr. Peters, a member of the Institute, bred a pure strain from the few mutant individuals and gave us some of their progeny for research.

Until now only one mutation in the eye colour of *Calliphora erythrocephala* had been observed. It was described by Tate[1] and called 'white' (*w*). In the *w*-mutation the eyes of the females alone are a light yellow-orange. This character is both sex-linked and sex-limited and occurs only in double recessive females. The eyes of the new mutant are pure white and are thus very different from the mutation described by Tate, which is also being kept here at the Zoological Institute of Munich. The new character occurs equally in both sexes; it is recessive and independent of the gene *w*. Because of their pure white colour it is suggested here that the name 'chalky' be given to this mutation and that the corresponding gene should be designated by the symbol *c*.

In order to find the source of the white coloration the eyes of the wild-type, of mutant *w* and of mutant *c* females were examined by selective extraction and spectrophotometry for the presence of the main groups of insect eye pigments, the ommochromes and the pteridines.

The ommochromes were extracted quantitatively from the isolated eyes by means of a mixture of methanol and hydrochloric acid[2]. In the case of the wild-type the colour of the extract was red; whereas in both the mutant eyes it manifested almost no absorption above 300 mμ. The difference spectrum, calculated from the absorption curves of the red and the colourless extracts, was compared with the spectra of several different pigments and agreed almost completely with the absorption curve of dihydroxanthommatin. Xanthommatin, the only ommochrome to be found in the eyes of Diptera[3], occurs mainly in the red dihydro-form in living flies. From the difference spectrum it can therefore be

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