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INHERITANCE OF PITTED EAR THROUGH SIX GENERATIONS

GEORGE C. HUFF AND WINIFRED BRILLHART

Several papers have appeared in recent years on the inheritance of ear pit (*Fistula auris congenita*), but despite the accumulation of data over a long period of years, the problem of the mechanism involved in hereditary transmission of ear pit is not completely satisfactory.

In the summer of 1941, quite by chance, it was learned that a certain family is proudly conscious of the "family mark." The first question asked by members of the family at the birth of a new infant is, "Does it have the family mark?" Additional questioning showed that the "mark" was a typical ear pit, unilateral or bilateral. From this chance original contact, it was finally possible to develop a pedigree of that family covering six generations from 1786 to 1941, including the records of one-hundred and seventy-nine individuals.

Most investigators have suggested that pitted ear is inherited as a dominant, and because the characteristic has been observed to skip a generation, the term "irregular dominance" has been used. An examination of published pedigrees (Whitney, 1939), (Connon, 1941) shows that couples in which either the husband or the wife showed the characteristic, had fifty children of which twenty-three showed the pitted condition and twenty-seven did not. On the basis of this distribution, the irregular dominant explanation is certainly tenable.

In the family under present investigation, parents, one of which showed the defect, had twenty-one children of which only four showed the pitted ear; which by itself may indicate that more is involved than a simple irregular dominance, or that ear pit is not inherited in the same way in all cases.

It is to be hoped that the addition of this pedigree to the accumulated data and future observations may clarify the mode of inheritance of pitted ear.

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