bromine. In contrast to this marked effect with diphenylamine, the total nucleoside concentration of such a sample of thymonucleic acid, when determined by the Mejbaum orcinol reaction[6], is only decreased by about 9 per cent. On the other hand, the free deoxynucleosides, with the exception of thymidine, do not develop any colour in the orcinol reaction after bromination.

It appears from these results that bromination causes a cleavage of the glycoside-N linkages of both purine and pyrimidine deoxynucleosides in thymonucleic acid. Further degradation of the deoxysugar is prevented by the phosphate attachments in position 3 or 5, which are not disrupted, as there is no release of organic phosphorus.

The fact that a proportion of the pyrimidine deoxynucleoside residues in thymonucleic acid fail to react with diphenylamine after bromination is evidence that the glycosidic attachment is less stable in these than in the isolated deoxynucleosides, and indicates that the C_1 of the deoxysugar of some of the pyrimidines in depolymerized thymonucleic acid are also engaged in "two distinct types of linkage (*a*) a form of polymeric linkage and (*b*) a glycofuranosidic attachment to the pyrimidine bases", as postulated for the deoxynucleosides of sperm deoxyribonucleic acid by Stacey and Overend[7].

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Dutch-type White-spotting in Rabbits

The Dutch rabbit usually featured in books on domestic rabbit keeping is a parti-coloured animal; the posterior half being coloured, while the anterior is largely white except for the ears and two eye circles of coloured fur. This pattern, however, is not stable. The characteristic pattern ranges from almost complete white (with blue eyes) to animals with odd white marks on the muzzle and fore-feet[1,2].

The extremely low grades of Dutch spotting are represented by small areas of white fur on the toes of the forefeet and point of the nose, the remainder of the body being normal. The expression varies from an unpigmented claw or small tuft of white hairs to a white stocking on either or both feet. White-spotting of this nature frequently occurs among rabbit stocks, and it is desirable to know the probable cause. I have been able to observe the incidence of such a case among a herd of rabbits kept for meat and fur.

A buck possessing an inch or so of white on the left forefoot was mated to five females devoid of white marks so far as could be seen macroscopically. 100 offspring were recorded as 59 self and 41 white spotted. The spotting varied somewhat, from a white toe to two inches of white foot, or a small white nose-tip to a thin streak extending up the forehead. The simplest explanation is that the male is heterozygous for a gene inducing the spotting, and the data do not conflict with the suggestion ($\chi_1^2 = 3{\cdot}24$, $P = 0{\cdot}1$–$0{\cdot}05$). Seven females from the self group were backcrossed to the buck, yielding 42 self: 35 white-spotted. By the same hypothesis, $\chi_1^2 = 0{\cdot}4608$, $P = 0{\cdot}5$–$0{\cdot}3$. Three females of the F_1 white-spotted class were also backcrossed to the male, yielding 11 self: 16 white-spotted as previously: 6 more extensively marked. In the latter, the white-spotting was expressed as almost all-white forefeet and an inverted *V* on the forehead. Assuming the segregation of a single gene, $\chi_2^2 = 1{\cdot}848$, $P = 0{\cdot}5$–$0{\cdot}3$. Combining the F_1 and first backcross, we have a total of 177, which were classified for sex as follows: 45 self ♂♂: 55 self ♀♀: 35 white-spotted ♂♂: 42 white-spotted ♀♀. An analysis of the segregation gave:

Item	χ^2	*n*	*P*
Genic	3·23	1	0·1–0·05
Sex	1·43	1	0·3–0·2
Linkage	0·02	1	0·9–0·8
	4·68	3	0·2–0·1

There is no evidence of partial sex-linkage.

The small deficiencies of white-marked animals may plausibly be attributed to weak expressibility or lack of penetrance of the white-spotting gene. No sign of heterochromia iridis was noted in any animal, but this is scarcely surprising since the condition is not usually manifested except in high-grade Dutch. It is possible that the gene described is comparable to Castle's du^d or Punnett's *s* or *t*.

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Mygalomorph Spider in Samoa

Mygalomorph spiders are notoriously absent from oceanic islands, owing to the fact that their young do not habitually distribute themselves by sailing in the air on gossamer. It is interesting, therefore, to record the occurrence in Samoa of *Idioctis helva* L. Koch, one of the Barychelidæ. This species was recorded previously only from Fiji, and the Samoan specimens differ only in minor details from the descriptions of the Fijian ones. Mygalomorph spiders of any kind are recorded in the south-west Pacific only from New Zealand, Fiji, New Caledonia and the groups to the north. All these islands are situated in the relatively shallower part of the ocean. Mygalomorphs have not previously been recorded on the truly oceanic islands to the east.

Specimens of *Idioctis helva* were collected at two widely separated localities on the island of Upolu, in Western Samoa, and also on a minute uninhabited islet between Upolu and Savaii. From this distribution it seems unlikely that it was introduced at a recent date. It inhabits a short, tough, silken tube, provided with a trap-door, and all the specimens were found within a few feet of high-water mark. All were on rocks; but if they also inhabit tree trunks they would be in a position to be transported across the sea on floating timber or on canoes. Human traffic between Fiji and Samoa cannot have a very