of inoculation. Internal organs appeared to be normal. Agglutination test positive in a dilution of 1:80. Three guinea pigs inoculated respectively with blood, liver and breast muscle remained well and when chloroformed on the 14th day appeared to be normal.

Pheasant No. 10 appeared to remain perfectly well until it was chloroformed on the 18th day. No infiltration at inoculation site. Internal organs apparently normal. Agglutination test positive in a dilution of 1:160. Three guinea pigs inoculated respectively with blood, liver and breast muscle remained well, and when chloroformed on the 16th day appeared to be normal.

The results obtained by skin inoculations of ring-necked pheasants indicate that tularemia infection is not easily established by such a procedure, if at all. Following the injection of *Bact. tularense* into the breast muscle, the organism may remain alive in that organ as long as 7 days, as shown by the result obtained on pheasant No. 7. An early invasion by *Bact. tularense* into the internal organs may occur, as indicated by its presence in the liver of pheasant No. 6, killed on the 4th day after intramuscular injection.

The pheasant appears to rid itself completely of the organism during a period following the 7th day, as it was not found on the 11th, 14th, 18th or 26th days. Specific agglutinins may occur in the blood stream by the 7th day following intramuscular injection, while it appears that no specific agglutinins are produced following cutaneous inoculation. In no case did a pheasant show any symptoms of disease following inoculation of *Bact. tularense*. It appears, however, that by intramuscular inoculation the organism will remain alive in the breast muscle, may invade internal organs and stimulate the production of specific agglutinins. We may say then that an experimental symptomless infection of tularemia may be produced in the ring-necked pheasant. The difficulties in establishing this infection, however, make it appear that the ring-necked pheasant would be immune to tularemia under conditions of natural infection.

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Iodine in Maryland Waters in Relation to Goiter.

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A large amount of seafood insures an abundance of iodine in the diet and there is very low goiter incidence in the tidewater region.

It has been shown that sea-spray blown back on the land accounts for a sufficiency of iodine only in a narrow zone, about 3 to 6 miles wide, along the coast, so this source of iodine is not sufficient to account for the low goiter incidence in the tidewater region.* As shown by the Draft Board statistics and Public Health Service, goiter is prevalent in the mountainous region of Western Maryland. This is accounted for by the low iodine content of the drinking water of 3 western counties, as given below, compared with that of Baltimore.

Mountain Counties	*Towns*	*Iodine parts per billion*
Allegany	Luke	1.18
	Lonaconing	0.72
	Cumberland	0.06
	Barton	1.21
	Westernport	0.30
	Frostberg	0.46
Washington	Hagerstown	0.10
	Hancock	0.18
Frederick	Brunswick	0.10
	Frederick	0.40
	Thurmont	0.16
Tidewater County		
Baltimore	Baltimore	5.00

The iodine content of drinking water is an index of the iodine content of the local food supply.

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* The isochlor for 6 parts per million of chlorine in the drinking water (almost pure rain water) is but a few miles from the coast in New England and New York (Emmons, W. H., *U. S. Geol. Survey Bull.* 529, 1913). Assuming that sea water contains 20 parts per billion iodine and 2% chlorine, there is one part of iodine to a million of chlorine and the isochlor referred to is the isoiodine line of 0.006 parts per billion, which is too small to be of significance in the prevention of goiter. In fact, the iodine content of non-goiterous regions of the United States is at least 100 times as large as this figure and the iodine content of the drinking water of Baltimore about 1000 times this figure. Near San Francisco (Mitchell, J. P., *Stanford Univ. Pub.;* Univer. Series No. 3, 1910) the isochlor for 50 parts per million in drinking water varies from a few yards to 6 miles from the coast, although the chlorine in the rain water is increased by intense evaporation. Using a ratio in sea water of 2 parts of iodine per million of chlorine (Cameron, A. T., "Contributions to Canadian Biology: Studies from the Biological Stations of Canada," 1922) the amount of iodine blown from the sea in drinking water would then be only 0.1 part per billion or not greater than in the goitrous region of Maryland.