by-product of the government seal boneyard, was $423,000. The bones of 10,000 to 12,000 seals might have been deposited each year since to increase the store of "government-owned fertilizer," but the fur-seal law has prevented the secretary of commerce from killing them. In addition to the loss of the bone, there has been the loss in seal skins, which in the meantime have risen to a price of $50 each. Incidentally these seal skins, if they could be taken, would also be valuable cargo for the ships "that may be provided by the pending administration ship purchase bill," and less troublesome than bone to handle.

George Archibald Clark

MATERIALS IN A TON OF KELP

The seriousness of the current shortage of potash gives increased importance to a careful consideration of the American sources of it. The following table gives in pounds the quantities of the materials mentioned that are contained in a ton (2,000 pounds) of fresh kelp. The three species mentioned are the ones that are harvestable in commercial quantities along the Pacific coast of North America. The supply available on the California coast is mainly *Macrocystis,* that in the Puget Sound region is mainly *Nereocystis,* while that in southern Alaska is *Nereocystis, Macrocystis* and *Alaria.* In western Alaska the supply is *Nereocystis* and *Alaria.*

	Water	Potassium Chloride	Other Salts	Iodine	Algin	Crude Fiber	Nitrogen
Nereocystis luetkeana	1,834	52.7	25.1 to 37.7	0.22	23.4	8.4	2.9
Macrocystis pyrifera	1,736	52.5	26.7 to 55.7	0.61	44.4	19.3	4.3
Alaria fistulosa	1,726	39.3	27.6	Trace	No data	No data	7.1

The computations are made from data obtained by workers in the United States Bureau of Soils, the University of California and the University of Washington.

The algin here reported is the adhesive material that can be dissolved in sodium carbonate and precipitated with acids. The crude fiber reported was approximately half cellulose.

George B. Rigg

University of Washington

THE TOXICITY OF BOG WATER

The writer has found by experiments that filtered bog waters show a precipitate when saturated with ammonium sulphate, disodium hydrogen phosphate, or sodium chloride. The filtrate from this when freed from the salt by dialysis did not prove toxic in solution cultures to the root hairs of *Tradescantia,* while the untreated bog water did prove toxic. The matter precipitated by these salts is not volatile at 100° C.

Since the specific gravity of bog water is 1.000, and its osmotic pressure is very low it seems probable that the substances present in this water are in a colloidal state. The above data tend to confirm this view and suggest that the colloidal matter may be a large factor in the toxicity of bog waters.

The waters used were obtained from sphagnum bogs in the Puget Sound region and Alaska.

George B. Rigg

University of Washington

EXHIBITION OF THE ROYAL PHOTOGRAPHIC SOCIETY

To the Editor of Science: The sixty-first annual exhibition of the Royal Photographic Society will be held as usual in August and September of this year. In order to facilitate the collection and forwarding of scientific exhibits I have been appointed one of the judges in the scientific section of the forthcoming exhibition and have made arrangements to receive photographs from American workers and to forward them to London, thus relieving the photographer of all difficulty and expense.

I should be very glad to hear from any American photographer who wishes to enter photographs in the scientific section of the exhibition of the Royal Photographic Society and to forward him an entry form.

For some years now the American exhibit in the scientific section has been a comprehensive one and of great interest to European workers