

145.—RAISING CARP IN A SUPPOSED ALKALINE WATER.

By E. S. STOVER.

[From a letter to Prof. S. F. Baird.]

In accordance with your request of August 21, 1884, I send you samples of young carp in alcohol, and 1 gallon of the alkali water in which they were raised. The carp were spawned in the latter part of May and the first part of June; not all at the same time, as some of the fish were kept in very cold water until late in spring. I lost four of my largest (two and one-half years old) at the fair by taking them from the warm pond water and putting them in a cold-water tank for exhibition. All in the pond are doing well; not one has died.

ALBUQUERQUE, N. MEX., *October 21, 1884.*

The water referred to reached Washington, October 28, 1884, and was referred to Dr. J. H. Kidder, chemist of the Fish Commission, for examination.

MEMORANDUM BY DR. J. H. KIDDER.

Five bottles (about 1 gallon) of water from E. S. Stover, Albuquerque, N. Mex., from his carp ponds, said to be "alkali water," in which carp were found to thrive. (Accession No. 15114.)

Pale yellowish green; offensive odor (sulphureted hydrogen); black flocculi; a considerable dark precipitate. Contents appear to have decomposed by standing. Reaction neutral. Sulphureted hydrogen is free and not combined with ammonia.

Total solids (of decanted liquid) at 130° C. = 84 grains to a gallon. Blackens and loses 8.5 grains to a gallon on ignition. Contains 29.4 grains of chloride of sodium to a gallon. No iron, much lime (as carbonate and sulphate), small quantity of soda or potassa (as carbonate or sulphate), traces of magnesia and silica.

SUMMARY.

Total solids at 130° C. = 84 grains to the (imperial) gallon.	
Of which, sodium chloride =	29.4
Loss on ignition =	8.5
Not estimated (mostly lime and salts) =	46.1
	84.0

The residue is slimy, containing much organic matter, and presenting under the microscope only various forms of bacteria (micrococcus and bacilli) and of the lower fungi.

The specimen has probably changed in composition by putrefaction, and a further quantitative examination would be of doubtful utility.

The indications are that it is rather a "hard" than an alkaline water, and contains no greater quantity of lime and salts than is often met with in limestone districts, not certainly exceeding 40 grains per gallon.

SMITHSONIAN INSTITUTION,
Washington, D. C., January 7, 1885.

146.—NUREMBERG CARP EXCHANGE.*

The carp exchange, held in the Café Liebel, was opened by Mr. Staub, chairman. He stated that the Nuremberg Association had abandoned its idea of aiding carp-culturists by buying carp and selling them at retail, because such action might hurt the fishermen and the dealers, while the exchange ought to protect in every way the interests of producers and consumers. Mr. Staub also stated that an English gentleman intended to rent a fish-water at least 8 meters broad, and containing principally trout and "aeschen" (*Salmo thymallus*), and requested owners of such waters to send in their addresses.

The fishery association of Central Franconia had resolved, in the interest of fish-culture, to have a professional otter-hunter engage in otter hunting in the waters of Central Franconia. A Mr. Morris, of London, had offered to exterminate the otters in the waters of Central Franconia. Mr. Morris made only one condition, that in case an otter should escape into the forests, all owners of hunting-grounds should allow him to hunt otters on their territory for at least two or three weeks. This matter will be referred to Baron von Hermann, governor of the province, and president of the fishery association of Central Franconia, with the recommendation to accept Mr. Morris's offer.

At the exchange there were offered for sale 29,500 pounds food carp (37,000 the previous year), 1,400 pounds pike, 200 pounds tench, 3,100 pounds young carp, and 2,300 pounds carp fry. Owing to church festivals, no buyers were present from Schwabach, Fürth, and the immediate neighborhood of Nuremberg. In spite of this, all the fish were sold. The average price for food carp, weighing from 2 to 3 pounds apiece, was 70 marks [\$16.66] per 100 pounds. Several fish-culturists from abroad have expressed their gratitude to the board of directors of the exchange, and to the Nuremberg Fishery Association, because they say that through the connections which they formed at last year's exchange they had been enabled last autumn and winter to sell their entire stock of fish. The president of a foreign fishery association, in a locality which is rich in fish, stated that this exchange enabled him to sell his fish for 10 marks [\$2.38] more than at home. For this reason the fish-culturists of his district will attend in future. The exchange lasted three hours.

NUREMBERG, BAVARIA, September 22, 1884.

* "Nürnberger Karpfenbörse," from the *Deutsche Fischerzeitung*, vol. vii, No. 40. Stettin, September 30, 1884. Translated from the German by HERMAN JACOBSON.