

by the Commissioners. Omitting these two, the average is 3.780, which is still far higher than any of the others.

If we refer to the headings Organic Carbon and Organic Nitrogen, there can be little doubt of the superiority of the Kent Company's water, but judging merely from the statistics under the awful heading of "Previous Sewage Contamination," that of the River Companies seems the purest.

Why the source of supply from the two rivers should be condemned as hopeless it is hard to determine. This startling recommendation to give up the supplies of water on which London for centuries has depended, is brought forward just at a time when the most strenuous efforts are being made to purify the rivers Thames and Lea, and but a few years after the Commissioners on the Water Supply of the Metropolis, within whose proper sphere this question lay, had reported that with perfect filtration and efficient measures taken for excluding from them the sewage and other polluting matter, these rivers will afford water which will be perfectly wholesome and of suitable quality for the supply of the metropolis.

It is not for me to enter into the chemical part of this question, but I may venture to express a doubt whether considerably more might not be done by increased reservoirs for subsidence, and by artificial aëration of the water, in addition to filtration, so as to carry still farther the oxidation of any organic matter it may chance to contain.

I have less hesitation in strongly insisting on the fact that, irrespective of the New River water, the metropolis is already supplied with 9,000,000 gallons per diem, or at least  $2\frac{1}{4}$  gallons per head, of the deep-well water so highly commended, a quantity which would seem amply sufficient for dietetic and culinary purposes. I am, moreover, of opinion that the difficulty of distributing this water over the whole area by means of a second service distinct from that of the water for ordinary domestic purposes, though great, is by no means insurmountable. Even were the waters of the Thames and Lea unfit for drinking purposes, it is very far from being the case, that London is in the same plight as Coleridge's "Ancient Mariner," with—

"Water, water everywhere,  
Nor any drop to drink."

Enough is already there for all culinary and dietetic purposes, could it but be distributed; and to lay out incalculable sums of money and inflict incalculable mischief, in order to import chemically pure water with which to lay the dust in our streets, and to flush our sewers, seems "a multiplying improvement in madness, and use upon use in folly." We might almost as well import wine for the purpose; and in that case the Commissioners might find a historical parallel in the proclamation of Jack Cade:—"Here, sitting upon London Stone, I charge and command, that of the City's cost, the conduits run nothing but claret wine the first year of our reign."

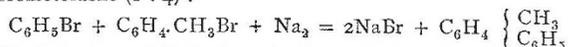
As deeply interested in the water-power and general prosperity of one of the chalk valleys within the fated radius of thirty miles, I may have spoken strongly on this question, and may not unfairly be accused of having done so from interested motives. No one, however, can submit silently to an insidious attack upon the property which he is fairly entitled to hold; and after carrying on experiments, for upwards of twenty years, as to the percolation of water to the underground springs in a chalk area, I may claim some experience in such a question, and much doubt whether my judgment is seriously distorted. Even should the abstraction of water be spread over a much larger area than has been supposed, so as to reduce the amount conveyed away from any particular district; or even should the gross quantity required prove less than supposed, it may be left to any one who will take the trouble to investigate the matter, to determine whether the effects if wider spread, or somewhat diminished in intensity, would be much less injurious. Any injury from this cause would moreover be felt with double intensity at those seasons, which are of by no means unfrequent recurrence, when even without this gigantic artificial abstraction, the water in the upper portions of the chalk district becomes short, and wells which during the previous season may have had fifty or sixty feet of water in them run absolutely dry.

It now only remains for me to thank the Council, the officers of the Society, and the fellows at large, for the uniform kindness and consideration which they have extended to me, not only during the two years I have had the honour of being your president, but during the eight preceding years, during which I was one of your secretaries. I look back with pleasure on the prosperity which, during those ten years, the Society has

enjoyed, a prosperity which I hope may continue even in a greater degree, now that I quit this chair in favour of my old friend and fellow-secretary, Prof. Duncan, who is, in all respects, so thoroughly well qualified to fill it.

### SCIENTIFIC SERIALS

THE *Journal of the Chemical Society* for January contains the following papers:—Isomeric terpenes and their derivatives (Part V.), by G. H. Brackett and C. R. A. Wright, D.Sc. The authors in this paper describe the results of their experiments upon peppermint camphor from Japan. This substance has been shown by Oppenheim to be an alcohol (menthyl alcohol) of the formula  $C_{10}H_{18}OH$ , which by the action of dehydrating agents yields menthene,  $C_{10}H_{16}$ , this latter substance when treated with bromine yielding a tetrabromide  $C_{10}H_{12}Br_4$ , which on heating splits up into hydrobromic acid and cymene. The cymene thus obtained is identical with those previously obtained from other bodies. The authors have examined also the toluic acid from seven different cymenes, and conclude therefrom that "by the action of a large number of agents on terpenes and bodies related to them, absolutely the same cymene results, this cymene being identical with the paramethylpropyl benzene recently obtained synthetically by Fittica." Clove oil hydrocarbons and the liquid oil from camphor sublimation have also been examined.—On the decomposition of stearic acid by distillation under pressure, by George Johnston. The oils produced contain, among other products, mixtures of seven paraffins with the corresponding olefines.—On tolyl-phenyl, a new hydrocarbon, by T. Carneley, B.Sc. The hydrocarbon is produced by the action of sodium upon a mixture of bromobenzene and pure bromotoluene (1 : 4) :—



The behaviour of this hydrocarbon on oxidation is described, and also some of its nitro and amido substitution derivatives.—A simple form of gas regulator for maintaining a constant temperature in air-baths, water-baths, incubators, &c., by F. J. M. Page, B.Sc.—The remainder of the journal is devoted to abstracts from foreign periodicals.

THE January number of the *Ibis* commences with a paper by Mr. Robert Ridgway, of the Ornithological Department of the United States National Museum, Washington, entitled "Second Thoughts on the genus *Microraster*," in which he modifies his view previously expressed as to the reduction of the number of species, from an examination of the specimens in Messrs. Salvin and Godman's collection. The same author also writes on the genus *Glauclidium*, embodying the results of Mr. Sharpe's criticism of a previous paper by him on the same subject; *G. jardiui* is figured.—Mr. D. G. Elliot has remarks on some type specimens of Trochilidae from the museums of Neuchâtel and Florence; and notes on the Trochilidae. In the former paper three of Tschudi's types—*Bourcieria insectivora*, *Heliodoxa leadbateri*, *Leucippus leucogaster*—are discussed. The male of the first is described; *Trochilus otero* (Tschudi) is the second; the third is one of two species only of the genus. Four of Sig. Benvenuti's types are described. *Mellisuga judith* is *Panplites flavescens*; *Mellisuga salvadorii* is the female of *Cyanerpes cyanurus*; *Mellisuga ridolfii* is a female of *Eriocnemis vestita*, and *Polytmus cecilia* is *Campylopterus curvipennis*. Mr. Elliot's second paper is on the genus *Lampropygia*.—Mr. C. Bygrave Wharton has Notes on the Ornithology of Corsica, describing 113 species, mostly from the west coast.—Mr. R. B. Sharpe gives Part I. of Contributions to the Ornithology of Borneo, with a plate figuring *Orthotomus borneonensis* and *Calamodyta dorae*, based on a collection made by Mr. Arthur Everett, *Circus spilornatus*, *Copsychus problematicus* (sp.n.), *Brachypodius immaculatus* (sp.n.), *Herpornis brunneus* (sp.n.), *Henicurus ruficapillus* are the species described for the first time from the island. Mr. Sharpe also determines two new species of South African birds collected by Mr. F. A. Barratt near the Macamac gold-fields. They are *Andropadus flavostriatus*, and *Bradypterus barratti*.—Mr. J. H. Gurney continues his notes on Mr. Sharpe's Catalogue of the Accipitres in the British Museum, discussing the Buteoninae.—Mr. H. E. Dresser gives notes on Severtzoff's Fauna of Turkestan.—Prof. Newton writes on the assignation of a type to Linnean genera, with especial reference to the genus *Strix*.—Messrs. H. Seebohm and J. A. Harvie Brown give notes on the birds of the Lower Petchora, based on an expedition made there last summer.