

## IN MEMORIAM.

**William Skey**, the late New Zealand Government Analyst, was born in London on the 8th April, 1835, and showed an early taste for chemistry, especially in its bearing on agricultural pursuits. On his leaving school he was put to learn practical farming, and, with his employer's son, built a laboratory in his spare time, for the purpose chiefly of trying the business of distilling spirits of wine from beet-root. A large quantity of the roots was contracted for, but, unfortunately, they were grown on peaty soil, and consequently only contained a small percentage of sugar, so that very little spirit was produced. This and other circumstances led to the abandonment of the enterprise, and in 1860 SKEY, along with his brother Henry (now in the Survey Office at Dunedin), emigrated to New Zealand, where they spent some time on the Otago goldfields, which were discovered at that time.

Early in 1863 he was appointed Laboratory Assistant to the Geological Survey of Otago under Dr Hector, in place of Mr. Charles Searles Wood, Associate of the Royal School of Mines, who received an appointment on the Geological Survey of Victoria. Mr. SKEY continued Analyst to the Geological Survey Department of the colony for twenty-seven years, until 1894, when he was nominally transferred to the Mines Department, continuing, however, to work in the same old laboratory until within six weeks of his death, which occurred on the 4th October, 1900.

For thirty-eight years Mr. SKEY served the Government, and with indefatigable industry applied his great talent for chemical research. The Laboratory register when he left off work showed entries which cover 12,416 separate analyses, more than ten thousand of which were performed by SKEY. Outside his laborious official duties he made many original contributions to chemical science, such as improvements in laboratory appliances; the electrical properties of metallic sulphides; the discovery of the ferro-nickel alloy "awaruite" in the ultra-basic rocks of West Otago, which is highly interesting as being the first recognition of a meteoric-like iron as native to our planet; the discovery that hydrocarbon in oil-shales is chemically and not merely mechanically combined; the discovery of a remarkable colour-test for the presence of magnesia; and the isolation of the poisons of many native shrubs. His suggestions for purifying water-tanks in India, for the use of the hot-air blow-pipe in the laboratory, and for the application of cyanogen salts to gold-saving, were some of his early achievements, which are now in practical use all over the world. His discovery that fatty oils treated with anilines form alkaloids hints at an important new departure in organic chemistry.

These and many other practical applications of SKEY's chemical talent are distinguished services to science, of which New Zealand should be proud. Without much training SKEY, possessing a natural bent, developed by diligent labour and hard study, attained to such a position as to be recognised as one of the world's famous authorities in certain branches of chemical science.

In WILLIAM SKEY the colony has lost a good servant and an able scientific man. He used to say that chemistry, farming, and poetry were the three things he took most interest in, and would sit up all night in the Laboratory composing and printing his poetical fragments with a hand type-press.

OFFICIAL LIST OF ANALYSES REPORTED BY WILLIAM SKEY.

Coals and mineral oils	..	..	..	..	..	789
Metallic ores	..	..	..	..	..	1,480
Special for gold and silver ores	..	..	..	..	..	3,764
Rocks and minerals	..	..	..	..	..	2,764
Waters (mineral, &c.)	..	..	..	..	..	657
Miscellaneous (soils, manures, adulterations, Customs Department, Fiscal Department)	..	..	..	..	..	2,962
						<u>12,416</u>

Of these analyses more than ten thousand were performed by SKEY.

The Report on the Mineral Exhibits in the New Zealand Exhibition, 1865 (Hector and Skey, Appendix, pp. 371-452) also contains a large amount of chemical work of great value to the colony which was performed by SKEY.

PAPERS CONTRIBUTED TO THE NEW ZEALAND INSTITUTE BY WILLIAM SKEY.

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LIST OF CHEMICAL PAPERS CONTRIBUTED TO OTHER PUBLICATIONS BY  
 WILLIAM SKEY.

- Report on New Zealand Flax. See Report on *Phormium tenax* (Hector),  
 1889, p. 47.  
 On the Absorption of Organic Matter from Solutions by Carbonaceous  
 Substances, and the Formation thereby of Coal-seams. Proceedings  
 of Royal Society, Edinburgh, 1866.

The following were printed in the London *Chemical News* :—

- Formation of a Substance from Coal resembling Artificial Tannin.  
 On the Removal of Nitric Acid from Sulphuric Acid by Charcoal.  
 On some New Reactions of the Oxide of Tungsten.  
 Preliminary Notice of the Formation of certain New Ammonia Salts of  
 the Metals, &c.  
 On a New Maroon Pigment.  
 On the Action of Alkalies upon Ferro- and Ferri-cyanides of Iron.  
 On a New Test for Cobalt in Solution.  
 Solubility of Cellulose in Ammoniated Copper.  
 Nature of the Gas escaping from Recently Prepared Charcoal on its  
 Immersion in Water.  
 Volatility of the Compound of Sulpho-cyanogen with Iron.  
 On the Production of some New Metallic Sulpho-cyanides. (Continua-  
 tion of last paper.)  
 On the Property of Tungstic and Silicic Acids to combine with Phos-  
 phoric Acid, and the Presence of Phosphoric Acid in Opal and Flinty  
 Quartz.  
 Solubility of Anhydrous Silica in Ammonia.  
 On the Coagulation and Precipitation of Clay by Neutral Salts generally.  
 On the Artificial Production of certain Crystalline Phosphates and  
 Arsenates.  
 On the Formation of a Series of Double Sulpho-cyanides of certain of the  
 Metals with the Alkaloids generally.  
 On the Effects of the Application of Hot Air to Blow-pipe Purposes, &c.  
 On the Alkalinity of Carbonate of Lime.  
 On the Absorptive Properties of Silica and its Direct Hydration by Water.  
 On the Examination of the Bark of the *Coprosma grandifolia* for Alka-  
 loids.  
 On the Extraction of the Poisonous Principle of the Tutu Plant (*Cori-  
 aria ruscifolia*).  
 On the Fusibility of Platinum in the Blow-pipe Flame.  
 On the Application of Iodine and Bromine for the Detection of Gold in  
 Small Quantities.  
 On the Absorption of Sulphur by Gold, and its Effects in retarding  
 Amalgamation.  
 On the Production of a Mono-hydrate of Chloride of Barium (with Notes  
 on its Crystallization, by E. H. Davis, F.G.S., F.C.S.).  
 Researches on the Absorptive Properties of Platinum.

- On the Capability of certain Sulphides to form the Negative Pole of a Galvanic Circle.
  - On the Reduction of certain Metals from their Solutions by Metallic Sulphides, and the Relation of this to the Occurrence of Gold in the Native State.
  - On the Electro-motive Power of Metallic Sulphides.
  - On the Conducting-power of various Metallic Sulphides for Electricity.
  - On the Electro-motive and Electrolytic Phenomena developed by Gold and Platina in Solution of Alkaline Sulphides, &c.
  - On the Poisonous Principle of the Karaka.
  - Further Researches on the Precipitation of Clay from Clay Water.
  - On the Presence in certain Vegetable Fibres of a Substance susceptible of Well-marked Colouration by Chemical Treatment, and the Discrimination of such Fibres thereby.
  - On a New and Easy Process for generating Sulphuretted Hydrogen.
  - On the Absorption of Ammonia by Cellulose in Presence of Potash, and its Proposed Application to the Removal of it by this Method from certain Organic Solutions.
  - On a New Method for the Preparation of Sulpho-cyanide of Potassium for the Laboratory.
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