

Science News a Century Ago

Lardner on the Theory of Railways

At a meeting of the Royal Society held on April 28, 1836, Lardner read a paper "On Certain Parts of the Theory of Railways; with an Investigation of the Formulæ Necessary for the Determination of the Resistances to the Motion of Carriages upon Them". In the course of his paper, he treated of the motion of trains on the level, on ascending and descending inclines and around curves. He confined himself to the analytical formulæ expressing various mechanical effects of the most general kind. He had, however, he said, made extensive experiments in the last few years, and had procured the results of experiments by others, and had made numerous observations in the ordinary course of transit by railways, and he announced his intention of placing the results of these experiments before the Society later.

Darwin in Mauritius

ON April 29, 1836, H.M.S. *Beagle* arrived at Mauritius, where she remained until May 9. Darwin in his "Journal of Researches" gave a short account of the island. On May 1, he took a short walk along the sea-coast, finding the country pleasant but without the charms of Tahiti or the grandeur of Brazil. The next day he ascended La Pouce, 2,600 ft. high. "The centre of the island," he wrote, "consists of a great platform, surrounded by old broken basaltic mountains, with their strata dipping seawards. The central platform, formed of comparatively recent streams of lava, is of an oval shape, thirteen geographical miles across, in the line of its shorter axis. The exterior bounding mountains come into that class of structures called 'Craters of Elevation', which are supposed to have been formed not like ordinary craters, but by a great and sudden upheaval. There appears to me to be insuperable objections to this view; on the other hand, I can hardly believe, in this and some other cases, that these marginal crateriform mountains are merely the basal remnants of immense volcanos, of which the summits either have been blown off, or swallowed up in subterranean abysses."

Since England has taken possession of the island, Darwin said, the export of sugar had increased seventy-five fold, while one of the causes of its prosperity was the excellent state of the roads. Although the French residents must have profited by the prosperity, the English Government was far from popular.

Baron von Ludwig and Sir John Herschel

IN one of a series of "Letters from a Cadet" published in the *Athenæum* of April 30, 1836, the writer gave an account of his visits to Baron von Ludwig and Sir John Herschel at the Cape of Good Hope. The former was a Dutch gentleman of ample fortunes which enabled him "to indulge his taste for natural history, while his enlightened liberality throws open his magnificent gardens to all strangers on the simple condition of sending in their names . . . his garden is that of a philanthropist as well as a philosopher; his fertile mind teems with projects for the improvement of the colony in which he is settled".

The writer had the pleasure of spending the morning with Herschel, finding him engaged in a course of astronomical researches which, he said, had already afforded some most interesting results. "He had made himself universally respected by his amiability, his readiness to assist the distressed, and his anxiety to join in all local schemes of improvement, whether in education, agriculture, commerce or scientific discovery. It is really a touching sight to behold this man, deservedly ranked among the first of his age, leaving an infant school, which has, in great measure, sprung up under his fostering care and influence, to draw up at the desire of the Cape Literary and Philosophical Society, a body of admirable instructions for the gentlemen composing the scientific expedition at present engaged in exploring the pathless wilds of Southern Africa."

Agassiz and the Geological Society

AGASSIZ (*Notizen a. d. Gebiet. d. Natur. u. Heilkunde*, April 1836), on the occasion of his visit to London, speaks in the following high terms of praise of the Geological Society: "The Geological Society of London is one of the institutions which have been founded on the most liberal principles and by its influence supports everything which even indirectly can contribute to the progress of science. It is to the generosity of the president and council of this society that I have been able to carry out a work in London which would have been impossible without the support and authorization of a society which enjoys a high reputation unparalleled in the history of the natural sciences. As I found that the collections of the three kingdoms possessed an enormous amount of material important for my work I wondered how I could best avail myself of it, and it was only through the liberality of the English men of science that I was able to take away with me the specimens which appeared to throw a new light on fossil fishes. On the application of Messrs. Greenhough, Sedgwick, Murchison and Lyell, I had permission to examine all these treasures in a room at Somerset House, where Mr. Lonsdale, the conservator of the Society's collections, helped me to arrange 2,000 specimens of fossil fish which I had selected from about 8,000 in England, Scotland and Ireland."

Societies and Academies

DUBLIN

Royal Dublin Society, February 25. T. J. NOLAN, J. KEANE and P. A. SPILLANE: The chemical constituents of lichens found in Ireland. (a) *Buellia conescens*. (2). The lichen contains atranorin, chloratranorin, diploicin, for which the formula $C_{16}H_{10}O_5Cl_4$ has been confirmed, and a substance closely related to diploicin and having the formula $C_{18}H_{11}O_5Cl_3$. Diploicin is a depsidone containing one methoxyl and one phenolic hydroxyl group, and is most probably derived from the condensation of two molecules of dichlor-orsellinic acid with the elimination of one molecule of carbon dioxide. T. J. NOLAN, J. KEANE and M. MOHAN: (b) *Lecanora gangaleoides*. (2). The lichen contains atranorin, chloratranorin, gangaleoidine, for which the formula $C_{18}H_{14}O_7Cl_2$