

at night and during early morning hours, as the inventor has to give his daytime to his profession of teacher. Signor Perini informs us that he could without difficulty make his planetarium as large as the Albert Hall and small enough to become a school apparatus for teaching. He showed us a table, like a small writing-table, between the tops of which he had arranged his machinery on a small scale to give motion to a tellurium which he fits on to the table. Of course the invention, as indeed Signor Perini admits, may be capable of improvements in detail, but as it stands it seems to us a triumph of ingenuity and determined perseverance, for which its inventor deserves the highest credit.

A MICROSCOPIC SERENADE¹



O COME, my love, and seek with me
A realm by grosser eye unseen,
Where fairer forms will welcome thee,
And dainty creatures hail thee queen.
In silent pools the tube I'll ply,
Where green conferva-threads lie curled,
And proudly bring to thy bright eye
The trophies of the protist world.

We'll rouse the stentor from his lair,
And gaze into the cyclops' eye;
In chara and nitella hair
The protoplasmic stream descrie,
Forever weaving to and fro
With faint molecular melody;
And curious rotifers I'll show,
And graceful vorticellidæ.

Where melicertæ ply their craft
We'll watch the playful water-bear,
And no envenomed hydra's shaft
Shall mar our peaceful pleasure there;
But while we whisper love's sweet tale
We'll trace, with sympathetic art,
Within the embryonic snail
The growing rudimental heart.

Where rolls the volvox sphere of green,
And plastids move in Brownian dance,—
If, wandering 'mid that gentle scene,
Two fond amœbæ shall perchance

¹ From *Scribner's Monthly Magazine* for November.

Be changed to one beneath our sight
By process of biocrasis,
We'll recognise, with rare delight,
A type of our prospective bliss.

O dearer thou by far to me
In thy sweet maidenly estate
Than any seventy-fifth could be,
Of aperture however great!
Come, go with me, and we will stray
Through realm by grosser eye unseen,
Where protophytes shall homage pay,
And protozoa hail thee queen.

JACOB F. HENRICI

JOHN ALLAN BROWN

IT is only a few weeks ago that it became our painful duty to record the untimely death of a distinguished mathematical and experimental physicist, and we have now to mourn the loss of one equally distinguished in observational inquiry. John Allan Brown was born at Dumfries, where his father had, we believe, a normal school especially intended for young men about to enter the navy. Upon the death of his father, Mr. Brown, then about twenty years of age, went to the University of Edinburgh, and speedily became a successful student in more than one branch of knowledge. But his strongest attachment was always to physical science, and the late James D. Forbes, who was at that time Professor of Natural Philosophy at Edinburgh, considered Mr. Brown as one of his very best pupils. A friendship was thus formed which lasted through life.

About 1842 the scientific world began to perceive the necessity of conducting cosmical inquiries, and Sir Thomas McDougal Brisbane, in the most generous manner, agreed to establish and maintain a magnetical observatory at his residence at Makerstoun. Prof. Forbes had thus the opportunity of recommending his pupil, Mr. Brown, to Sir Thomas, who gave him the directorship of his observatory. In this capacity he continued to reside at Makerstoun for some years, where the delight of pursuing an occupation congenial to his tastes was enhanced by the great pleasure he derived from the society of Sir Thomas Brisbane, and of his amiable family, and their loss one after another was a very severe trial to him. It was no slight task to superintend an institution such as this in a branch of science then comparatively new, and Mr. Brown laboured so hard at his duties that he began to have palpitation of the heart, caused, probably, by his constant night watches. In consequence of this he obtained as his assistant Mr. John Welsh, who became one of his warmest friends, and who afterwards, as Director of the Kew Observatory, won for himself a high reputation in the course of a life that was, unhappily, very short.

Mr. Brown left Makerstoun in 1850 and went to Paris, where he formed the acquaintance of the lady who was afterwards his wife, Isaline Vallouy, the daughter of a clergyman in the Canton du Vaud, and belonging to an old Protestant family of Dauphiné (du val Louise) who had fled from France at the Revolution. This lady is now left to mourn his loss. From this marriage he had three sons and two daughters. Of his sons one is an architect, one has just left this country to enter upon his duties as civil servant in the North-West Provinces of India, while another, in preparation for the Indian forest department, is finishing his studies at Nancy. In 1851, through the influence of his friend, Col. Sykes, Mr. Brown was appointed director of the Trevandrum Observatory, an institution supported by His Highness the Rajah of Travancore, and he left this country for India in the same year. Of the scientific value of his work in India we will speak later on; but we may remark that it was