

## One of Darwin's Last Letters

April 3rd, 1882

Dear Sir,

After much deliberation I have thought it best to send your very interesting paper to the Zoological Soc. in hopes that it will be published in the Journal. This Journal goes to every Scientific institution in the world, and the contents are abstracted in all year-books on zoology. Therefore I have preferred it to "Nature", though the latter has a wider circulation, but is ephemeral.

I have prefaced your essay by a few general remarks to which I hope that you will not object.

Of course I do not know that the Z. Soc., which is much addicted to mere systematic work, will publish your essay. If it does I will send you copies of your essay, but these will not be ready for some months. If not published by the Socy. I will endeavour to get Nature to publish it. I am very anxious that it should be published and preserved.

Dear Sir

Yours faithfully,  
Ch. Darwin.

(Signed)

Down,  
Beckenham, Kent.  
Railway Station  
Orpington, S.E.R.

MUSIC

## Plagiarism in Music Detected by Dictionary

NEW YORK'S "Tin Pan Alley" composers will find themselves in difficulty if a new musical dictionary invented in Vienna crosses the Atlantic. Thousands of old tunes and musical themes are so arranged that anybody with even a slight knowledge of music can find where, when and by whom any allegedly new tune was first composed.

Since many modern "hits" are notoriously only the bones of old masters made to jig to a jazz rhythm, this new dictionary can make life very uncomfortable to present-day tune-grinders by showing up their plagiarisms.

The dictionary is based on the simple fact that the seven tones of the scale are named for the first seven letters of the alphabet. Each theme is written on a card, as a combination of the letters of which it is made up. The first few letters suffice for "initials." Thus, the entry for The Star-Spangled Banner, as written in the key of C, would read: Gecegc.

Identification of tunes, many of them unknown to the testers, has been tried by humming them to the two inventors of the system, and in every case the original composition traced without difficulty. Thousands of tunes and themes have already been listed, and more are being constantly added.

The music dictionary is the work of two brothers, Werner Rolleder, a concert pianist, and Anton Rolleder, a judge, both of Vienna.

*Science News Letter, October 5, 1935*

HISTORY OF SCIENCE

## Letter Written by Darwin Returned to Down House

A LETTER written by Charles Darwin, the great evolutionist, a few days before his death has been returned to Darwin's residence, Down House, now a shrine of science under the protection of the British Association for the Advancement of Science.

Written to Dr. H. T. Van Dyck, then lecturer and now emeritus professor of zoology at the American University at Beyrouth, Syria, over 53 years ago, on April 3, 1882, Darwin praises an essay by Dr. Van Dyck and says he is recommending its publication by the Zoological Society of London. Darwin died 16 days later.

Dr. Van Dyck has added the letter to the Darwin relics in Down House.

*Science News Letter, October 5, 1935*

ASTRONOMY

## Dark Regions in Space Less Black Than Was Supposed

CELESTIAL "coal sacks," the dark areas of the sky where great clouds of cosmic dust obscure the light from stars behind them, are not quite so black as previously supposed, Director Otto Struve and Dr. C. T. Elvey of the University of Chicago's Yerkes Observatory told the American Astronomical Society.

As seen on astronomical photographic plates the dark coal sack regions appear as vacancies among the stars. Astronomers generally consider them, Dr. Struve told Science Service, as great condensations in the general cloud of inter-stellar dust which pervades all space.

Stars which shine through such dust clouds have their light reddened just as the sun at sunset looks redder because its rays pass through a greater length of terrestrial dust than when the sun is overhead.

Prior to recognition of the dust screens in space there were many errors in determining the distance of stars because of the dimming of their light, Dr. Struve pointed out.

The new investigations disclosing that the coal sack regions are not quite so dark as previously thought were made possible by a combination of instruments never before reported in the literature.

The great 40-inch diameter refracting telescope of Yerkes Observatory was

coupled to a newly designed photometer constructed by Dr. Elvey. Photometers are sensitive light measuring instruments. Dr. Elvey's instrument was built from a design first suggested by the world-famous French astronomer-mathematician Prof. Ch. Fabry of Paris.

With the 40-inch lens of the telescope gathering the faint light from the coal sack regions and the photometer to give quantitative measurements of its intensity, Drs. Struve and Elvey found that the dark regions were slightly brighter than the background sky. The difference, however, is so slight as to be close to the lower limit which can possibly be detected with the precision instruments of modern science.

Many technical difficulties had to be overcome by the Yerkes observers, Dr. Struve explained. Effects which would be caused by the earth's atmosphere required that observations be made only when the dark region to be investigated was rising or setting and was almost exactly the same distance above the horizon as the polar stars, so that these stars, which always remain at the same altitude, could be used as standards or comparison stars in determining the brilliancy of the region. Probably twenty or thirty additional dark clouds will be observed during autumn.

*Science News Letter, October 5, 1935*