



AND SHIPPING INTELLIGENCE.

...the despatching... in January 1893... the despatches... to date of the present year...

REVENUE DEPARTMENT.

FRANCE. Paris, December 26, evening.—The Budget... of this evening gives a detail to the statement... of the Budget for the fiscal year...

THE WEAHER.

Over the British Isles yesterday the weather was... a very rainy and stormy weather... to the north of the afternoon, and fell more and more...

Reference.

REPORT OF THE SCIENTIFIC RESULTS OF THE... Voyage of H.M.S. Challenger during the years... 1873-76. By Z. S. Tanner.

...notably well... as in shallow water... of the land, and therefore the evidence... is not so clear as in deep water...

REVENUE DEPARTMENT.

FRANCE. Paris, December 26, evening.—The authorities at... have had the proposal... of the Budget for the fiscal year...

RUSSIA.

St. Petersburg, December 26, evening.—The official... Russian newspapers concerning the... of the railway...

FORECASTS OF THE WEATHER FOR SATURDAY.

(ISSUED BY THE METEOROLOGICAL OFFICE AT 5 P.M.) SCOTLAND, N. AND SCOTLAND, E.—North-east... and west winds; fresh to strong...

RUSSIA.

St. Petersburg, December 26, evening.—The official... Russian newspapers concerning the... of the railway...

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CANADA.

Ottawa, December 26, evening.—The Dominion House of... Commons has today passed the... of the railway...

THE UNITED STATES.

New York, December 26, evening.—The Chicago branch... of the Lake and Western... of the railway...

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gravitation is another powerful source of movements in plants, and these also Mr Darwin regards as merely forms of modified circumnutation. Plant movements excited by gravitation are largely subterranean, and probably the most deeply interesting part of the book to non-specialists is that in which he describes the complex influences which direct the movements of the roots, and the remarkable powers with which the tips of these organs are endowed. If the root of a seedling be placed horizontally on the ground, the tip, in obedience to gravitation, will turn downwards, and transmit an influence which will cause the adjoining parts to do likewise. If the tip, however, be amputated before the root is thus placed, the latter continues to grow, but this downward tendency is arrested and remains in abeyance till the growth of a new tip starts it afresh. It is a still more remarkable fact that if the tip be not removed until the root has lain for some time in the horizontal position, an influence is in the meantime transmitted from the tip to the upper parts, which continues to act after amputation. "To see anything like the above in the animal kingdom," says Darwin, "we should have to suppose that an animal, while lying down, determined to rise up in some particular direction, and that after its head had been cut off an impulse continued to travel very slowly along the nerves to the proper muscles, so that after several hours the headless animal rose up in the predetermined direction." It is the tip also which discriminates between a slightly harder and a softer object, and which thus guides the root along the lines of least resistance in the soil, the tip it is also which alone is sensitive to moisture, and which therefore guides the whole organ towards it. The reader of Mr Darwin's observations on this point will agree with him that it is hardly an exaggeration to say "that the tip of the radicle thus endowed, and having the power of directing the movements of the adjoining parts, acts like the brain of one of the lower animals." The work is brimful of interesting observations, carefully verified, and as such will be acceptable to all naturalists, while to the evolutionist it will be additionally welcome as supplying another link in the long chain of circumstantial evidence by which he seeks to put the truth of this doctrine beyond all controversy. It ought to be stated that in the carrying out of the extensive series of experiments of which the present work is largely a chronicle, as well as in the preparation of the work itself, Mr Darwin has had the assistance of his son, Mr Francis Darwin, whose independent biological researches have already given promise of future distinction in the field with which the name of Darwin will ever be associated.