Even those explorers who attempt to describe closely what they see are hampered by the lack of terms of precise meaning with which to name the elements of a landscape; for, apart from the rarity of teaching in this important branch of physical geography, there is too little recognition of the connection that necessarily and often clearly exists between internal structure and external form, — too great neglect of the evolution of topography, during which the features of youth, maturity, and old age, succeed one another. There should be a terminology as well defined and extensive as that which botanists have invented for the description of leaves; for it is about as indefinite to call a country hilly as to call a plant leafy. There should be a collection of typical forms in models or figures marked with descriptive terms, approved by some authoritative body, to serve as a standard by which travellers might be trained. The question is well worthy the attention of geographic societies and congresses.

IT is much to be regretted that it has been found necessary to suspend the operations of the Northern transcontinental survey. It was organized about two years ago, under the direction of Mr. Raphael Pumpelly, to obtain a comprehensive and authoritative knowledge of the resources of the vast region in the northwestern part of our country tributary to the Northern Pacific railroad and the associated companies, at whose cost it was undertaken. Up to that time this extensive territory, embracing, perhaps, one-fifth of the United States, had been very imperfectly explored geographically, and was still less known as regards those resources which will contribute to the business of the railroads that traverse it. A large amount of accurate information has now been gathered, and in small part published. Mr. A. D. Wilson, of broad experience in western exploration, was put in charge of the topographical work, with Messrs. Goode and Nell as chief aids; and we have just received a set of six maps, the fruit of their first season's surveys, a notice of which will be found in the 'Notes and news.'

FROM a circular just issued by Professor Dohrn, we learn that the cost of publishing the *Zoologischer jahresbericht* for 1879 and 1880 amounted to nearly $7,000, while the income from sales of the publication amounted to only $2,317. The zoölogical station at Naples has thus been obliged to meet a large deficit, amounting to at least two-thirds of the cost of publication. It is plainly not within the means of the station to continue indefinitely this work without assistance. The governments of Italy, Germany, and Russia, as well as one or two zoölogical societies of Holland, have made subventions which cover about one-third of the deficit. The three volumes of this work already completed speak for themselves. Every naturalist will learn with regret that a work of such general usefulness is in danger of being discontinued from the cause above named. We certainly hope that Professor Dohrn's appeal for assistance will meet with a liberal response, both in the way of subscriptions for the *Jahresbericht* and in subventions.

LETTERS TO THE EDITOR.

*** Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

Earthquake waves at San Francisco.

ASSISTANT George Davidson telegraphs the superintendent of the U. S. coast and geodetic survey from San Francisco, that at 7 h. 24 m., last evening, earthquake waves were indicated by the delicate levels of the astronomical instruments of the observatory. The amplitude of each vibration was three seconds of arc, in three seconds of time, and they continued for twenty minutes.

C. O. BOUTELLE,
Assist. in charge of office, etc.

Coast and geodetic survey office,
Jan. 26, 1884.

Influence of winds on tree-growth.

I notice at p. 471 of the issue of *Science* for Oct. 5 some remarks by Mr. W. S. Kennedy on the influence of winds on tree-growth. It may be of interest to learn that many of the trees on the seashore at Government House, Malabar Point, Bombay, are bent landward from the effect of the prevailing sea-breeze.

H. RIVETT-CARNAC.

Allahabad, N. W. P., India,
Dec. 8, 1883.

Some curious natural snowballs.

On p. 237, vol. i., of *Science*, under notes and news, is a reference to some curious snowballs noticed in *Scientific American* for March 17. Such an exhibition I lately saw; and it may interest readers of *Science* to know the conditions favoring such a phenomenon.

On Jan. 8 and 9 some thirty inches of snow fell in this region, followed by warmer weather and light rain on the night of the 10th, settling the snow into a