

more than 360,000 titles among 3,750,000, filling, when printed alone, 4'32, or in round numbers, 5 volumes of the 45, while he must undergo the trouble of using all the 45, or of this work,  $\frac{4}{5}$ , i.e., 89 per cent. is useless and annoying for him, and  $\frac{1}{5}$ , or 11 per cent. only is useful; the space needed for the catalogue is about 4 metres, 44 centimetres of which are useful, and 3m. 56cm. disturbing; and, last but not least, he pays 36l. instead of 4l.

But with all this superfluous work, still no complete catalogue is acquired, but a very deficient one; for of periodical journal articles there are about 3,000,000, separate works about 6,000,000 in a rough estimation, or together, 9,000,000, i.e. (no main titles or cross-references being herein comprised), about six times the number possessed by the British Museum library.

Supposing, in the same proportion as above, these 9 millions of publications to be accompanied by 12 millions of main titles, &c.; supposing, then, these 21 millions of entries to be composed of 4'2 millions of old and 16'8 millions of new ones, the publication of these could be effected as follows:—

The titles of old books, being used much seldomer than new ones, and belonging mostly to fifteen to twenty different branches, could form a special catalogue of fifty volumes, whose price would be 40l.; each great city might content itself with a single copy accessible to all men of science.

The remaining 16'8 millions of modern publication titles, divided into fifty branches, would give 360,000 entries for each of them, or five volumes for 4l., so that even private libraries would be enabled to possess a complete catalogue of all modern publications of a single branch.

As to the construction of such catalogues, the following would perhaps be a practical method:—

At first a committee for the defining of branches and the limit between old and modern publications should be appointed, to which all greater libraries should send copies of their catalogue classifications; by means of these copies exact rules for the extent of branches and the method of working could be drawn up in six months.

This work done, a numerous catalogue committee should be formed, to which all greater library catalogues should be sent in copies; where such copies are wanting the library should be examined by members of the committee, using the thitherto ready part of the catalogues.

The periodical publications before 1800 and after 1873, should be registered in the same manner as those in the "Royal Society Catalogue," and then subdivided into single branches by the committee. In this way complete catalogues for great groups could be formed, care being taken not to restrict the limits of these too much in order to hasten the publication of the work. This publication would be the first and hardest step to a manageable index of literature.

During the next ten years after its publication the completion could be carried out by putting beside each title a short classification of its contents, not an extract—contained in a single word or phrase, like "electrostat.," or "relat. age mortal.," for "electrostatics" or "relation between age and mortality," or a few single words when different matters are treated; these classifications, made simultaneously by different persons and compared, together with all corrections, could be printed about twelve years after the first catalogue, and form the final work, which at short intervals of five or ten years should be completed by appendices.

ARISTIDES BREZINA  
Custos of the Imperial Mineralogical  
Museum, Vienna

### Distribution of *Mus rattus*

I AM able to-day to complete my note in NATURE, vol. xx. p. 29, as to the exact habitat of the black rat in Thuringia. Prof. Liebe, of Gera, kindly wrote to me that it occurs in East Thuringia and the Voigtland in single elevated side-valleys of the rivers Weisse El-ter and Roda, as well as in single lurking-places of the Frankenwald. Here it occurs in isolated forest-houses, in the valleys, in whole partly large villages, for instance, St. Gangloff. In this place for a long time past *Mus rattus* and *M. decumanus* have occurred together among each other, not one above the other, on different floors, as might be supposed, though *rattus* now and then rather prefers the upper floors, and the latter does not appear to be decreasing in number. In those villages about three specimens of *rattus* are always killed for one

specimen of *decumanus*, the latter, apparently, being less numerous.

A. B. MEYER  
Dresden, Royal Zoological Museum, May 20

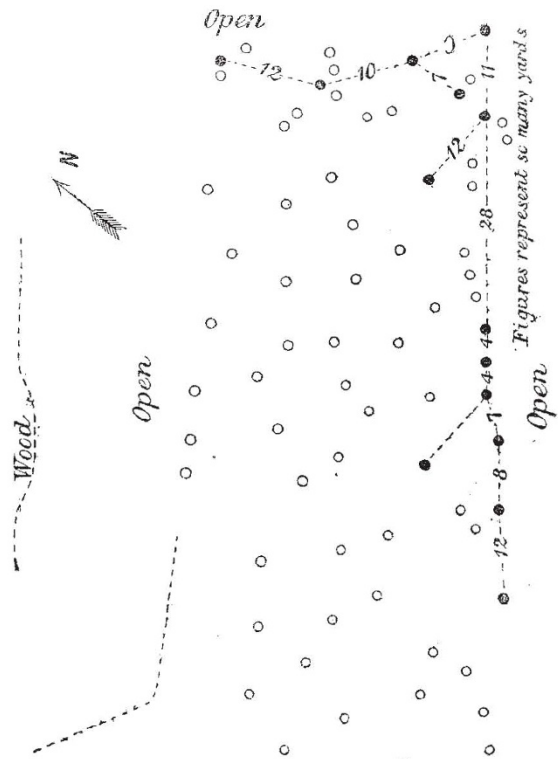
### Insect Galls Buds

I WAS much interested in Mr. A. Stephen Wilson's letter upon this subject (NATURE, vol. xx. p. 55). I must, however, demur to his statement that "all insect-galls are in reality leaf-buds or fruit-buds," as too sweeping to be accurate. I can hardly include in the above category the numerous galls which make their appearance on the growing leaves of trees, such, for example, as the oak-spangles (of *Neuroterus malpighii*) or the galls of the *Spathogaster baccarum*, *Andricus curvator*, &c., several of which may be placed on the veins of a single leaf. These examples cannot assuredly be classed as pathologically developed leaf or fruit buds only so far as woody growth usually takes place through buds. In a short paper I once read at the Linnean Society, an abstract of which appeared in NATURE during the early part of the year 1875, I drew attention to the fact that the growth of galls took place coincidentally with the growth of the tissues in which they were placed; thus the development of the bud-galls of *Cynips kolleri*, *Teras terminalis*, and *Aphilothrix gemma*, is to be seen in the spring, summer, and early autumn, but not in winter time when the tree growth is arrested. My observations at that time led me to suppose that the currant galls of the oak and others of the same class only grow during the growth of the leaf to which they were attached.

I trust Mr. Wilson will give your readers the benefit of his further researches on this subject.  
W. AINSLIE HOLLIS  
Brighton, May 16

### Effects of Lightning

A REMARKABLE electric discharge occurred on Sir Robert Gordon's estate of Letterfourie in a small wood about four miles to the south-east of this place on November 16 last about 12.45 A.M. The accompanying sketch (scale  $\frac{1}{4}$ " = one yard), where



the trees (common fir and larch) struck are represented by black dots, will give you an idea. The soil and trees were slightly covered with snow, which had been falling at intervals since sunset on the 15th. On that night I observed two or three flashes of lightning accompanied by thunder, and a few days afterwards