

pecially in the laying out of the areas surrounding the factories of the European traders was accountable for the production of a large number of breeding places for mosquitoes, which could easily have been avoided. In fact, it is certain that in West Africa such conditions are far more dangerous and more common than the proximity of a marsh or swamp, which is often noted as a cause of fever. Indeed, the mangrove swamp of West Africa has no direct relation to malarial fever, its presence only tending to predispose to a condition of general health rendering the subject more likely to the attack of disease in general. The observations of the members of the expedition lead them to very definite conclusions as to the methods to be adopted for the prevention of malarial fever among Europeans in West Africa. They consider that many of the methods which have been suggested are absolutely impracticable in West Africa—such as the universal dosing of infected persons with quinine for a period, the use of mosquito-proof houses, and of mosquito curtains, and the planting of trees of various kinds; although they are of opinion that such measures among an intelligent and obedient community may be of some efficiency. The two methods upon which alone any reliance can be placed as measures for prevention are (1) segregation of Europeans from natives of all sorts, at a distance of about half a mile; and (2) complete and efficient surface drainage of the whole district in the immediate neighborhood of European quarters. The adoption of these methods in many of the places visited by the expedition would be, even now, easy; in others, especially in the larger towns, it would involve considerable difficulty; but in the stations likely to be made in Nigeria in the near future their adoption would lead to the formation of malaria-free habitations.

CONCILIIUM BIBLIOGRAPHICUM.*

THE beginning of the twentieth century marks a new period in the history of the Concilium Bibliographicum. It is now just ten years since the origin of the movement

* From the general statement for 1900.

which led in 1895 to the official foundation of the institution by the vote of the Third International Congress of Zoology.

Means were provided for carrying on the work for a preliminary period of five years, in order to determine whether the project could be made a success. The experimental stage is now passed and the verdict of all those who know the work well is that the high hopes entertained for the undertaking have been completely justified.

NUMBER OF CARDS PUBLISHED.

	1896	1897	1898	1899	1900	Total
Zoology, systematic.....	3345	2291	7539	7960	8452	29587
Zoology, topical			7593	8434	7877	23894
Zool., alphabet. (cross-references).....				350	1256	1606
Anatomy.....		583	1857	936	1875	5251
Physiology.....		150	1230*	1270	433	3083
	3345	3024	18209	18950	19893	63421

A recent report of the Swiss Society of Naturalists endeavors to estimate in a specific case the saving of time afforded by the card catalogue in obtaining references to recent publications in regard to the trout. The saving is estimated at half a day. But in regard to other cases the saving is far greater. Let any zoologist familiar with past bibliographical resources consider how he would go to work to ascertain what has been published in the past five years in regard to some minute question, such as the fauna of Sumatra. A moment's reflection will suffice to show that it would be a task of many weeks to obtain an answer to such a question. Yet a subscriber to the faunistic part of the bibliography of the *Concilium* would only require a few seconds to find 62 publications dealing with the question. The titles of ten of these publications would, it is true, bear no mention of Sumatra; they are classed here because on perusing the text important references to Sumatra were found. Some, indeed, bear titles that would seem absolutely to preclude any notes on the fauna of Sumatra, as, for example, a work on 'The Insects of Germany.' Subscribers to any considerable portion of the bibliography would have received these references for 80 centimes (8d. or 16 cents), and any per-

* An error was made in this item in our last annual statement, which we now correct.

son, whether a subscriber or not, could receive the information for 3 fr. 10 (2s. 6d. or 62 cents). Surely no comment is necessary to prove the value of the work nor the extreme cheapness of the service.

The gradual success of the work from a scientific standpoint has led to a corresponding improvement of the financial status of the work. For the first three experimental years there was an average annual deficit uncovered by the subsidies of Frs. 5625, while for the last year this deficit had fallen to Frs. 224.

All this has now induced the Swiss Government to take a step which decided the entire future of the enterprise. By a recent vote of parliament its subsidy is increased fivefold, and arrangements are being made to give the work permanence by making it independent of the person of the present director.

In the past year great progress has been made towards bringing the bibliography up to date. For certain departments it is already the most complete bibliography in existence. At present the malacological department, which had been far behind, is being brought up to the standard of excellence maintained by the whole. Later, attention will be given to protozoa and worms, especially as regards notes contained in medical journals, and finally ornithology will follow.

The anatomical bibliography has recently received renewed attention. Indeed the number of titles is more than double that issued in the previous year and yet they form but a small part of the extensive manuscript now ready for publication. The publication of the physiological bibliography, on the other hand, has been suspended and can not be resumed for two or three months, in consequence of technical difficulties which can only be overcome by the purchase of new machinery. This unfortunately can not yet be obtained from the factory. In the meantime a complete set of guide-cards has been published.

The Concilium owns a manuscript card catalogue of new genera and species (including new names) which are recorded as soon as published. From 1901 on, copies of any part of this catalogue may be obtained at the uniform charge of 10 centimes per entry (minimum 50 centimes). Since the cards are arranged faun-

istically as well as systematically, most diversified orders can now be received, *e. g.* : New genera and species of trichoptera, of bombycids, etc., new genera and species described from the Cape Colony, from the Philippines, from Texas, from Perthshire, etc., new reptiles from Japan, or simply new species of *Carabus* or any other genus.

The usefulness of a card catalogue depends largely on its being properly mounted and supplied with guide-cards. The sets of guide-cards issued in previous years are described in a special circular. A description of the new card cabinets of the Concilium is also the object of a special pamphlet. American subscribers would find it, however, more profitable to turn to the well-known Library Bureau.

The cards thus far published have been taken from no less than 1,576 periodicals. A list of journals showing precisely what volumes and numbers have been excerpted is in preparation and will, it is hoped, soon be issued. Experiments are being tried with a view to opening new facilities of subscription in regard to the great faunistic areas. But above all, our program for 1901 is to render the references more complete and to approach more nearly our final aim, which is to *remove the entire burden of bibliographical research from the shoulders of the working biologist*.

In closing, we wish to thank especially the Swiss Government and the Elizabeth Thompson Science Fund for their generous support in the past, without which none of this work could have been carried on.

SCIENTIFIC NOTES AND NEWS.

DR. H. A. ROWLAND, professor of physics in the Johns Hopkins University, died suddenly on April 16th.

PROFESSOR J. WILLARD GIBBS, of Yale University, has been elected an honorary member of the London Physical Society.

THE University of St. Andrews conferred its LL.D. on Mr. Alexander Agassiz, of Harvard University, in April. Mr. Agassiz returned from his visit abroad last week.

THE Board of Visitors to the U. S. Naval Observatory held its first meeting at Washing-