



On National and International Protection of Nature

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## SOURCES OF RECORDS

I. *Phanerogams and Ferns*.—Purchas and Ley, "Flora of Herefordshire," 1889, and subsequent additions; Watkins, "Florula of the Doward Hills," *Trans. Woolhope Club*, 1881; Herbarium E. Armitage, Vice-counties 34 and 36.

II. *Bryophyta*. (1) *Musci*:—Ley, "Moss Flora of the Doward Hills," *Journ. Bot.*, 1891; Herbarium E. Armitage; additional records by C. H. Binstead, H. N. Dixon, and H. H. Knight. (2) *Hepaticae*:—Herbarium E. Armitage; additional records by H. H. Knight.

(N.B.—The Flora of Gloucestershire is not yet published.)

ON NATIONAL AND INTERNATIONAL PROTECTION  
OF NATURE<sup>1</sup>

BY PROFESSOR H. CONWENTZ

(With Plates XVI—XVIII and four Figures in the Text)

I have been requested by Dr Forrer, President of the International Conference, to discuss, primarily, the methods of national protection of nature which have long prevailed in Germany.

## CENTRAL INSTITUTE IN BERLIN

In 1906 the Prussian Ministry of Education founded a Central Institute for the Care of Natural Monuments (*Staatliche Stelle für Naturdenkmalpflege in Preussen*), which is at present located in the Old Botanical Museum in Berlin (Fig. 14). This Institute contains seven main rooms, among which there are a library and a hall (Plate XVII) for public lectures and other large meetings, conducted with the aid of lantern slides. Besides the Director of the Institute, there are three Chief Assistants, of whom two are naturalists and one a lawyer; there are also two librarians and two clerks. The Institute disposes of the funds provided by the Prussian Budget and receives, besides, further contributions.

## LOCAL COMMITTEES IN PRUSSIA

In order to help the Central Office, committees for the care of natural monuments have been formed in the different provinces, and also in several government districts, land districts and territories. It is intentional that no stereotyped form of society has been inspired, because there already exist countless societies, and a general weariness of this form of activity prevails. In the committees, the various spheres of interest are represented by delegates. To these belong, for instance, representatives of the universities, of the royal government, of the agricultural department and of those of forestry and schools, of the provincial self-administration, of the large towns, of the museums and societies of natural history, of the

<sup>1</sup> An address delivered to the Berne International Conference for the Protection of Nature, November 18, 1913.

unions or clubs of college instructors and of public school teachers. The highest ranking administrative official generally presides in the committee, and the business proceedings are conducted by an honorary secretary who is either a university or college professor or a director of a museum. These committees, of which there are 40 in Prussia, receive no financial support from the state; they are, however, aided by the provincial self-administrations and by the land districts and towns. Some of the provinces grant the committees 1000, 2000 or 3000 marks annually, to provide for the expenses of administration, that is to say for stationery, printing, postal and express charges, journeys, etc. In every committee a board of working active members is formed, which must hold more frequent conferences. There are some committees which hold more than 20 working meetings annually, and besides this, the committees endeavour to obtain correspondents in the country.

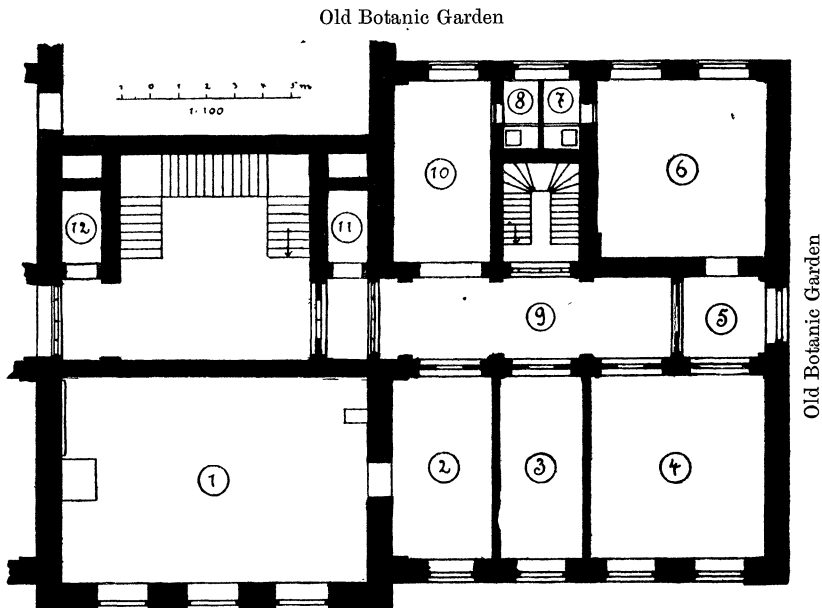


FIG. 14. Plan of the Central Institute for the Care of Natural Monuments (Staatliche Stelle für Naturdenkmalpflege in Preussen), in the Old Botanical Museum, Grunewaldstrasse, Berlin. Room no. 1 is the Lecture Hall (see Plate XVII).

#### OBJECTS AND ACTIVITIES OF THE CENTRAL INSTITUTE IN BERLIN

According to the fundamental principles, issued by the Minister, the objects of the Central Office for the Care of Natural Monuments are to learn of natural monuments, and to investigate and preserve them. Under the term *Natural Monument*, characteristic formations of nature are understood, particularly those which are still in their primitive location and have remained completely, or almost completely, untouched by civilisation. To these belong not only individual forms and species, but also plant and animal associations, geological and scenic rarities. As soon as adequate information has been gained by means of lists of queries, and

the territory itself has been investigated by scientific specialists, it becomes possible to make inventories of the natural monuments, according to their location in the districts of administration, and according to their ownership. At the same time the natural monuments are mapped, and photographs or other sketches are made. Inventories, maps and illustrations constitute the archives of natural monuments in the office.

Besides this, a *Library* has been established, which shall include a complete collection of the literature relating to the dangers threatening natural monuments and their prevention; also the laws having reference to, and scientific works determining and discussing, certain selected monuments of nature, and the special literature for the investigation of more extensive regions of natural reservations. A special bookcase contains over 50 periodicals, and 18 cases contain the topographical and geological maps, and those of the forests of the state territory, and also photographs, lantern slides and photographic negatives arranged according to countries.

Five years ago a beginning was made towards collecting an International *Bibliography*, concerned in a wider sense with the care of natural monuments and the protection of nature in general. This collection comprises now more than 3000 headings, arranged alphabetically, according to the names of the authors. At the same time all the publications concerned with some special thing or country are quoted under selected key-words<sup>1</sup>.

The principal *publication* of the Central Office is the *Beiträge zur Naturdenkmalpflege* (Contributions to the Care of Natural Monuments), and of this journal the fourth volume is now in the press. In this publication, the reports of the Central Office and further treatises concerned with the care of natural monuments in foreign countries are included; they are destined principally for scientific circles, administrative officials and lovers of nature. Besides this, a second series of publications appears with the title *Naturdenkmäler: Vorträge und Aufsätze* (Natural Monuments: Lectures and Essays). These include less voluminous publications and are written in a manner intelligible to the general public, with the intention of carrying the ideals of care for nature among all classes of the people; five illustrated pamphlets have already been published. In addition to these, lectures which have been given for various reasons are circulated in the form of pamphlets. Last of all, many committees publish in easily comprehensible papers—*Mitteilungen* (Communications)—which are principally destined to be circulated in their own special spheres of work and interest. In the Central Office, from time to time and according to demand, “courses of instruction” lasting two or three days are held—these are intended chiefly for strangers who desire to become acquainted with our aims and methods. Furthermore, weekly deliberations take place in which are discussed reports of greater importance, and questions pending among the collaborators residing in Berlin. Besides, every December an “Annual Meeting for the Care of Natural Monuments” is held in which the managers of the committees

<sup>1</sup> The Honourable N. Charles Rothschild, who spent some days in the Institute and also took part in one of our weekly conferences, thought the International Bibliography so important that he sent a young lady from London over here to learn our methods of working and to use them in England.

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and also the referees of the governing boards and delegates from similar organisations in the other German federal states and individual foreign countries take part.

The Central Office has the pleasure of receiving numerous visits from scientific men and administrative officials of our own and of foreign countries. Notably, scientific men from Austria, Hungary, Russia, Norway, Holland and Japan visit us frequently. Last year the Agriculture Department of St Petersburg sent a delegate to obtain information.

As far as our *external activity* is concerned, we consider it our duty to cause all classes of public administration, and all branches of society as far as possible, to become permeated with the idea of care for nature, and convinced of the importance of its realisation. Owing to the novelty of this idea, it is necessary to begin by informing, interesting and instructing these people as far as possible. In order to gain the interest of the young, lectures must be held for their teachers. For many years my collaborators and I myself have been accustomed, whenever possible, to give instructional lectures at the official meetings of teachers, with lantern views, and in connection with these an abstract is printed and copies handed to each teacher. In one year, alone, almost fifty lectures of this kind were given at meetings and societies of teachers. In a similar manner, the support of high school teachers and university professors must be gained for these good objects. The Minister of Education has recommended that the professional instructors promote investigation and preservation of natural monuments in their lectures. Rectors of universities have already taken the theme of natural monuments as subjects for their inaugural addresses, and lectures have been given and dissertations written about them. Some time ago I was requested by the Minister of Agriculture, Domains (Crown Lands) and Forests to give addresses upon the care for natural monuments in the academies for the study of forestry and in other high schools concerned with his departments. At the present time a weekly lecture of one hour, during one semester (half-year), upon the protection of nature is held in an Academy of Forestry.

### FOREST AND OTHER RESERVES IN PRUSSIA

The *Administration of the State Forests* takes a prominent part in our work. In the year 1898 I tendered the Minister of Agriculture, Domains (Crown Lands) and Forests, in Berlin, a memorial in which I called attention to the endangering of primitive nature and made proposals for protecting it. Forests are among the most threatened regions, as they have been utilised to such a great extent since time immemorial. Especially since the inauguration of a systematic management, the natural forests are receding more and more, and instead, cultivated forests consisting of comparatively few kinds of trees arise. The pretty general method of clearing at present in vogue results in the almost complete destruction of original trees and undergrowth, and a simultaneous disappearance of the remaining specimens of flora and fauna whose existence is dependent upon them. Rare trees perish annually from carelessness, and whole forest districts are mercilessly cut down. If remedies were not soon devised to put a stop to this destruction, the

primitive forest with its characteristic flora and fauna, which is at the same time the scene of legends and early history, would disappear for ever. My suggestions were concerned chiefly with the following points. Primarily, that an exploration of the forests, and at the same time an *inventory* of the natural monuments, should be undertaken. The most noteworthy shrubs, trees, groves and more extensive tracts of forest, which were to be protected, should be entered in the registers and in the forest maps (Fig. 15), in order to acquaint the foresters with the economically important specimens entrusted to their care and especially with those of scientific interest. Thus, every province should publish memoranda containing a concise list of its natural monuments and provide these memoranda, as

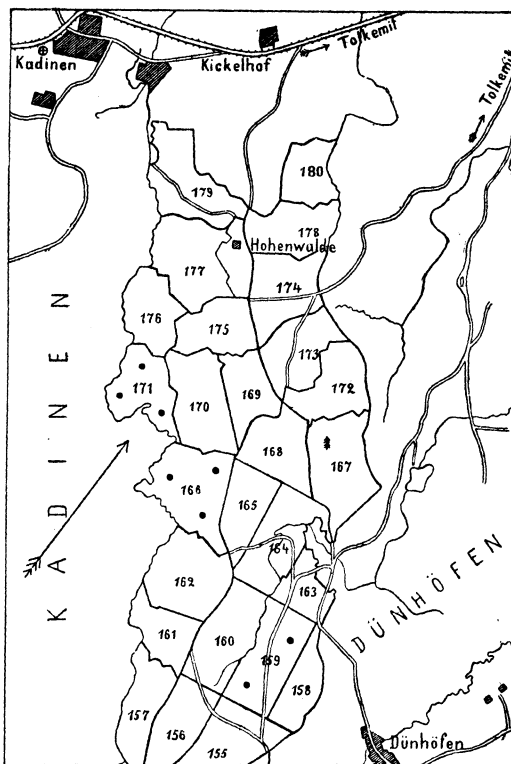


FIG. 15. Section of a forest map showing the geographical limit of the Spruce Fir.

far as possible, with sketch-maps, brief descriptions and illustrations. Furthermore, in the territory itself suitable *measures of preservation* should be inaugurated, so as to preserve individual trees and groves; and, above all, extensive clearings should be avoided in these forest preserves. These propositions were accepted by the Minister, and the Administration of State Forests has spared no pains in promoting the measures necessary for the care of natural monuments.

Of very great importance is a *General Order* of 1907. This order empowers the royal provincial governments to start *reservations* in more extensive districts, and to provide that these regions of forest be dealt with differently from the

ordinary scheme of management and in a manner furthering the object in view. Instructions have furthermore been given to protect those animals which are either harmless or, because of their rarity, incapable of doing much damage. Among these may be mentioned hedgehogs, woodpeckers, ravens, owls, black

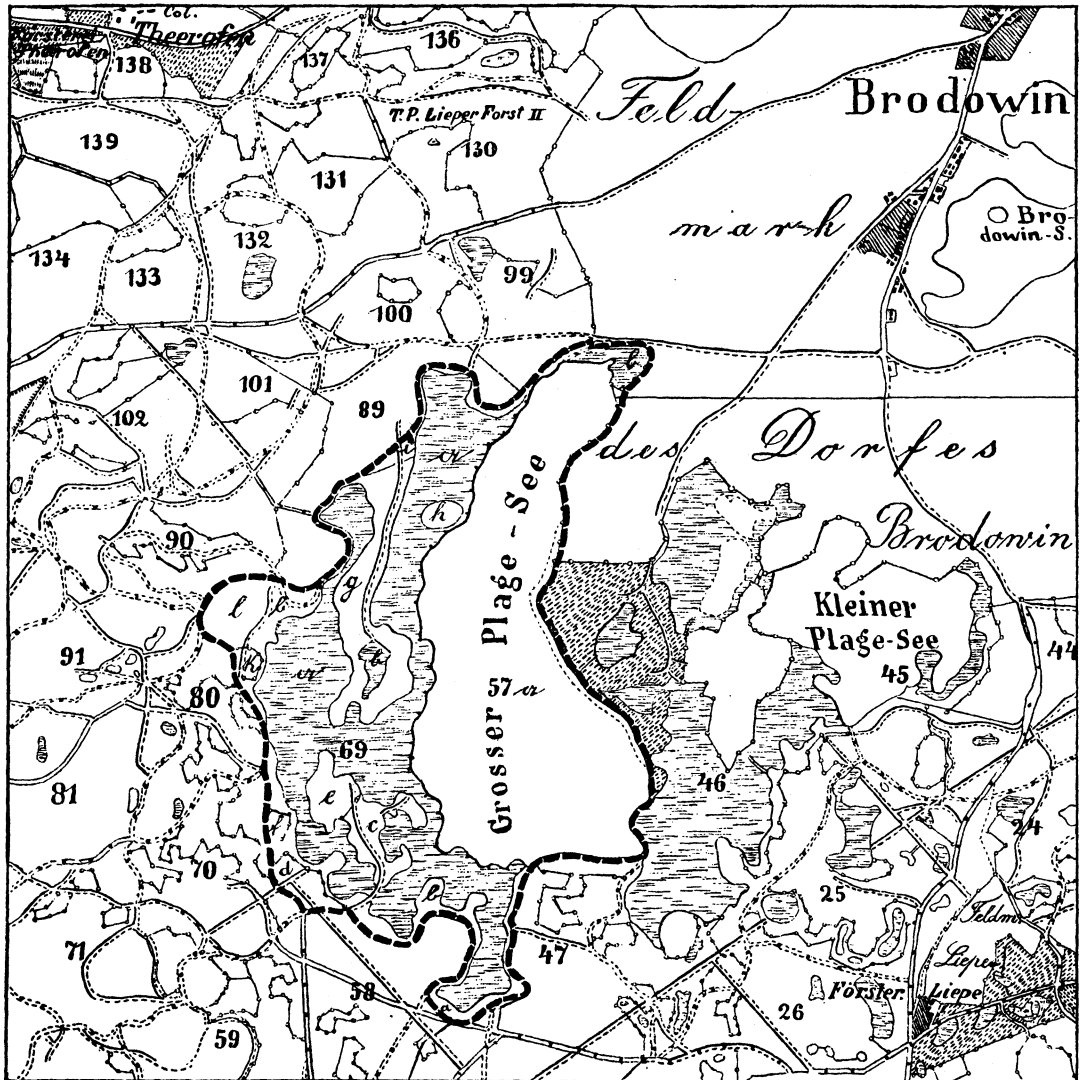


FIG. 16. Map of the Plage Fen Reservation, Province of Brandenburg, Germany.

storks, cranes, cormorants, etc. Besides these, noteworthy rocks and cliffs must be preserved as natural monuments. In every forest-district enquiries are to be made as to the natural monuments there, and the results communicated to the Central Office, and every forest-district must now maintain a special *Registry of*

*Natural Monuments.* The Forest Map Office in Berlin was requested to communicate with the Central Office before every publication of a forest map, in order to provide, as far as possible or desirable, for the entry of natural monuments known in the area concerned.

In consequence of this Order, numerous smaller or greater *reservations* have been laid out. In the province of Brandenburg, the Plage Fen (Fig. 16), with the Plage Lake, comprising 167 hectares (about 420 acres) were preserved six years ago. Hunting and fishing are prohibited; no tree is cut down, and fallen timber is allowed to remain on the ground. It now became the duty of the Central Office to explore this reservation systematically. To carry on this work, several geologists, botanists and zoologists have been at work for from two to three years, and have made, to a certain degree, an inventory of the natural features of the region. This inventory has been published in an extensive work, provided with illustrations and maps<sup>1</sup>. It is the intention of those in charge of this undertaking to re-explore this region after the lapse of an extended period of time, to determine what changes have occurred in a district which had been entirely abandoned to itself. Then, in the forest district of Sadlowo, East Prussia, a beech grove of 42 acres, which is situated upon the geographical limit of this tree, and in the forest district of Colbitz, near Magdeburg, a grove of lime trees of 33 acres area, have been reserved. Again, 177 acres of beech and oak groves have been reserved in the Reinhard Forest, near Sababurg, situated in the government district of Cassel. This has been done largely to preserve model forest tracts for landscape painters. Besides this, the forest administration has purchased a small moor at Neulinum, not far from the river Vistula, where there is a natural growth of the very rare dwarf birch (*Betula nana*), and the authorities propose to protect it completely; as far back as 10 years ago, an exploration of its fauna was begun, and as the botanical and geological investigations have now been completed, a monograph dealing with the reservation will shortly be published. In another locality, situated not far from Königsberg, East Prussia, the Zehlau Marsh (Fig. 17) which contains 5900 acres, and the adjacent woods, has been reserved. Recently, as announced by me in this JOURNAL (1, 1913, p. 161), Prince William of Hohenzollern has inaugurated a reservation of great natural beauty, which is situated in his extensive estates in the Böhmerwald. The tract contains 535 acres, and the Institute for the Care of Natural Monuments has undertaken its exploration. For this purpose a geologist, two botanists, a zoologist and a scientific photographer were sent from Berlin, and have been at work there for two years. It may be added that the region in question starts at a height of 1008 metres, and rises to the summit of the mountain ridge at a height of 1343 metres. Furthermore, numerous other reservations, zoological and geological as well as botanical, have been made in state forests. For instance, an island, situated in a lake, belonging to the state forests, but of private ownership, was purchased to serve as a sanctuary for birds. The ridge of Ith, in the forest district of Coppenbrugge, Hanover, and

<sup>1</sup> Conwentz, H., Dahl, R., Kolkwitz, R., Schröder, H., Stoller, I., und Ulbrich, E. "Das Plagefenn bei Chorin: Ergebnisse der Durchforschung eines Naturschutzgebietes der preussischen Forstverwaltung." *Beitr. z. Naturdenkmalpflege*. Band III. Berlin, 1912. 688 pages. (See notice in this JOURNAL, 1, 1913, p. 232.)



the sandstone cliffs in the forest district of Nesselgrund, Silesia, have been protected against quarrying operations, etc.

In general, we do not believe that the value of reservations depends alone upon their size. In Europe, reservations of square miles (German)—*circa* 16



FIG. 17. Zehlau Marsh Reservation, East Prussia, Germany.

English square miles—cannot as a rule be laid out in a country like Germany to-day, but only in the Alps, in Russia, or in the Far North, etc. It is of particular importance to arrange for *reservations of the most varied kind, distributed over the whole country*, even if they be of quite small area. In one place, for instance, a geological profile will be protected, in another a remarkable cave, in still another a landscape with moraines; here we select a sand dune on the sea-coast, there a moor, in another place a fen; again, we may protect an island with meadows in a river, a heathy landscape, or a sunny hill with a growth of steppe-flora; lastly forests, breeding places of rare birds, and so on.

There are many people who are inclined to believe that the whole problem of the protection of nature is to be solved by the simple creation of extensive reservations. But reservations only form a part, though an important one, of the great and varied programme which has been embarked upon. If we did not endeavour to educate the whole population towards protecting and caring for nature, the idea could only too easily arise that, whereas everything inside of the reserved areas should be protected, everything outside of them might be considered more or less outlawed.

In the year 1907 the *Home Department* issued a General Order in which the objects included in the care of natural monuments were indicated, and it was prescribed that only in the case of vital necessity should the maintenance of a natural monument be abandoned. The chiefs of land districts in the whole country are able to further energetically the care of natural monuments, because of their position and their extended acquaintance with their districts. We may add that these officials have in fact done much already to further these ends. In one locality 300 marks of the district funds were used to preserve a small moor, in another 600 marks to protect an erratic block, in a third more than 3000 marks were voted to purchase a prominent basalt cliff—to mention only a few cases.

It would lead us too far to indicate here in what manner the support of other departments, such as the Department of Agriculture, that of Constructions, and others, has been gained for our labours. Let us only mention that even the Military Department and the Church (both protestant and catholic) have endeavoured successfully to further our ends. At the same time, municipal communities have shown much interest, and since the towns often own extensive forests, they are well able to arrange for reservations in them. Besides this, some towns, such as Dresden and Cottbus, have acquired extensive forests from private owners and assumed the obligation of maintaining them as forests in perpetuity. The Rhine Province provided 13,000 marks this year to protect the Kakus Cave, and 70,000 marks to purchase an interesting Maar landscape in the Eifel mountains.

Furthermore, societies of the most varied interests have co-operated actively in the protection of natural monuments. More than 100 societies have now definitely included this object in their statutes, while hundreds of natural history, tourist and similar societies have voted funds to purchase natural monuments. The hunting societies were made interested in the idea of putting an end to the granting of rewards for the killing of predatory animals, a practice which had existed from time immemorial, and it is gratifying to be able to record that every one of

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the twenty-five German societies abolished some of these rewards, whilst three societies abolished them altogether.

### NATURE PROTECTION IN OTHER PARTS OF GERMANY

So much for Prussia. The ministries of Bavaria and Württemberg have instituted *National Committees* for the Care and Protection of Nature in their respective countries, and these committees, again, have created sub-committees throughout the whole country. In *Bavaria*, there are several committees in every district (corresponding to government-district in Prussia), in all 16 committees. In every district there have been appointed confidential agents (correspondents) for the land districts (*Bezirksamt*, corresponding to *Kreis-Landratsamt* in Prussia), so that about 500 confidential agents are in active charge of 170 land districts. The National Committee for the Care of Nature at Munich is at the head of the whole organization, and the University, the great societies (such as the Geological Society, the Botanical and Ornithological Societies, the Society of Bavarian Architects and Civil Engineers), the great union of artists, the Bavarian Agricultural Council and others are represented. Even the police officials are made familiar with the subject by means of lectures on the protection of nature which are held in the Bavarian school for military police. A number of natural reservations have been laid out in Bavaria. The Botanical Society of Landshut assured the protection of the remainder of the Sempter Heide (Heath) by purchase in 1877. The Garching Heath, situated near Munich, has been protected by the Bavarian Botanical Society at a high cost; this area is a heath of xerophytic character, with a growth of principally East European flora. Another society, the Isar Valley Society, aims especially at protecting prominent landscape features around Munich. Artists, brewers and others raised a considerable sum of money, on the inspiration of Gabriel von Seidl, to secure for the common weal a very beautiful landscape on the Isar, which had been threatened with the erection of a factory building.

The Minister of Public Education is at the head of the organization in *Württemberg*. A circuit committee has been created in every land district, so that 64 circuit committees have been formed. The Württemberg Forest Administration has laid out reservations, while the Stuttgart Society for the Protection of Birds not only owns a natural reservation of about 45 acres in the Federsee (Fedor Lake) but also takes an active part in the creation of numerous bird-sanctuaries in Württemberg, in other German federal states and in foreign countries. In Stuttgart there is another organization, the Naturschutzpark Society, for the acquisition of parks for the protection of nature, which aims at laying out reservations extending to square miles in North Germany, South Germany and Austria.

In *Saxony*, there exists a national society for the care of natural features, art and architecture. The Ministry is represented on its board of management, and the State Budget provides a considerable subvention for this society. The department of protection of nature, in which there are a number of specialists, holds frequent working meetings and develops a very considerable activity. The

State Forest Administration has laid out several natural reservations, among others a moor reservation of 24 acres around the Kranichsee in the Erzgebirge. A society was founded under the patronage of the King for the protection of the Saxon Switzerland, and this society succeeded, in a few years, in purchasing numerous quarries, in all about 70 acres. It is also worthy of mention that Saxon Switzerland has been preserved from mountain railways, as all plans of that nature have been refused by the cabinet. In the order issued by the cabinet in 1897 as a reason for the above-mentioned refusal, it was stated that considerations of an aesthetic nature must also be entertained against the projects.

There is in *Baden* a National Society for Natural History and Protection of Nature to which is entrusted the care of natural monuments, and which receives an annual subvention from the government. The Ministry of Public Education took cognizance of the national society and issued to all the schools instructions directed towards the promotion of the protection of nature in Baden. The society published a pamphlet of rules for the protection of nature and a series of picture postcards with admirable representations of rare plants and plant associations. Moreover, the society is actively engaged in preserving natural monuments from destruction. By its efforts an exchange was effected whereby the Lotenbachklamm (gorge of the Loten brook), with all its woods, was acquired by the state and thus protected. When the great electrical power station was constructed in the Murg Valley, particular care was taken to preserve the amenities of the landscape. The issue of general orders for the protection of the flora by individual land districts has been made generally effective by a supplement to the police penal code, which had been suggested by the society and voted by the Diet in 1912. This society has also laid out two reservations, of which one serves to preserve a dune, and the other some rare orchids.

Some of the smaller German states have joined the Prussian organisation directly, and have been turned over to the Prussian committees situated nearest to them.

All in all, we see that in the German countries either a government organisation or one with a considerable government subvention has been created for the promotion of the protection of nature. Besides this, local societies have been founded here and there, which collaborate with these organisations and raise the means for acquiring by purchase natural reservations and individual natural monuments. It is universally recognised that only thus can the efforts directed towards the protection of nature and her monuments have effective and lasting results, and endeavours should be made everywhere to secure the foundation of a state office to serve as a nucleus for these labours and endeavours in one's own country.

#### NATURE PROTECTION AS A NATIONAL DUTY

We may state in general that the protection of nature is a part of home protection, and constitutes therefore a national and patriotic duty. For the successful carrying out of these endeavours, it is essential that the national and patriotic spirit be invoked, and that individuals, communities, and the whole nation become interested in the idea of maintaining a portion of home nature for

the present generation and for posterity. It would be quite impracticable and unsuitable to try to undertake from a foreign country the protection of nature in various parts of the world. In general, one's own country alone is in a position to discover and protect its own natural monuments ; just as it is its duty to care for its own artistic and historical monuments. From the variety of national characteristics and of parliamentary institutions, certain regulations which can be carried through in one state may be quite impossible in another. The legal and constitutional conditions vary so exceedingly that a uniform code of regulations for the protection of nature cannot be thought of. Besides this, compulsory nature protection in the territory of civilised independent states would constitute a violation of the sovereignty of their legislation and administration, and would for this reason alone be unacceptable.

The care of natural monuments, like the cultivation of science, is the duty of each individual state, and above all, therefore, a national duty. We may also add that even the definition of natural monuments may vary considerably in different countries and sections of the same. For instance, glacial abrasions are a common feature upon the Swedish coast, but they represent very remarkable natural monuments in the few places in Germany where they appear on contiguous rocks and must, therefore, be protected. Again, the mistletoe (*Viscum album*) is generally common in Germany, but it is very rare in some of the northern countries and should therefore be regarded as a natural monument there.

#### INTERNATIONAL NATURE PROTECTION

Although the protection of nature is to be regarded in general as a national duty, and must remain such, yet there are a number of problems which cannot be discussed and solved by one nation alone. For these problems, an *international protection of nature* is desirable, and the beginnings of such an undertaking were made at least 30 years ago. The international agreement made in Paris in 1883 for the protection of seals in Behring's Sea and the prevention of their extinction, the international convention held in Paris in 1895 for the purpose of protecting those birds which are of benefit to agriculture, and the international convention held in London in 1900 which had as its object the preservation of various species of animal life in extensive districts of Africa, have already engaged the attention of this Congress.

There are however other matters which are not perhaps so well known but deserve to be mentioned here. During the Peace Conference, which was held in 1899 at the Hague, the delegates of the interested powers came to an agreement regarding the protection of forests in an enemy's country—the state which occupies foreign territory should only consider itself to be an administrator and usufructuary, so that the cutting down or sale of state forests by an enemy should be impossible for the future. The fifth International Zoologists' Congress, which met in Berlin in 1901, made recommendations for the furtherance of "all the efforts towards the preservation of species of harmless higher animals which are threatened, by the progress of the organisation for the care of natural monuments" in Prussia and in other German states, at the beginning of this century ; international protection of

nature was also considered. I may quote the following from the published abstract of my address to the Geographical Society in Berlin in 1903. "Beyond these considerations, international suggestions are made for the care of regions which are not owned by any sovereign power. From this point of view, portions of the ocean must be set aside for the purpose of preserving the marine mammals, fish, etc., found there, and also certain sections of 'no man's land'—for instance Spitzbergen (reindeer) and Greenland in so far as Denmark has not occupied it (musk-ox, etc.). Similarly, certain delimited portions of the Antarctic Continent must be proclaimed inviolable, by international agreement, so as to preserve the forms of life existing there in their primitive condition<sup>1</sup>." The Spitzbergen problem was discussed in greater detail in another lecture which I gave in 1904 before the Geographical Society of Stockholm<sup>2</sup>. Furthermore, in the memorial of 1904 which forms the basis of the Prussian organisation for the care of natural monuments there is a paragraph devoted to international protection of nature. In the same year the first call for a *world-wide union for the protection of nature* was made at Vienna. It was intended to unite all the societies, already existing and concerned with the subject, in a European international union, but the death of the author of this idea taking place shortly after prevented its being followed up. A little later, the International Congress of Botanists which met at Vienna in 1905 expressed the wish that a considerable forest reservation should be started in Bosnia, and this idea has been now realised.

At the International Congress for Agriculture and Forestry held at Vienna in 1907, I was called upon to report on the preservation of primitive (indigenous) tracts of forest, and to make suggestions as to legislative, administrative and voluntary co-operation among the countries interested in the matter. In the general principles, which have been agreed upon, the request is made, among other requirements, that still existing primitive (indigenous) tracts of forest which are incorporated in forests belonging to state, community and private owners are to be reported. In the appraising of these tracts, a binding and positive statement must be made as to which are to be reserved. These forest reservations are to be entered in the forest maps and be systematically explored in regard to their flora and fauna. Clearings of great extent are to be avoided as far as possible, and undergrowth and hollow trees are to be allowed to remain, so as to protect the animals whose conditions of life are dependent upon their maintenance. A legal basis should be formed, so as to preserve private and communal forests in special cases by means of the process of sequestration. Forest academies and other educational institutions for foresters should pay especial attention in their lectures to the preservation of primitive (indigenous) forest tracts and individual natural monuments. In the same year (1907), at the Leicester Meeting of the British Association for the Advancement of Science I read a paper upon the care of natural monuments, with especial reference to those in England and Germany.

<sup>1</sup> **Conwentz, H.** "Schutz der natürlichen Landschaft, ihrer Pflanzen- und Tierwelt." *Zeitschrift der Gesellschaft für Erdkunde zu Berlin*, Jahrgang 1904, p. 202.

<sup>2</sup> **Conwentz, H.** "Om skydd åt det naturliga landskapet jämte dess växt och djurvärld, särskildt i Sverige, Ymer 24. Jahrg. 1904." Stockholm, 1905, p. 39.

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This lecture was elaborated into a little book in which the international problems of the protection and care of nature are fully treated<sup>1</sup>.

To *France* is due the credit of convoking the first international congress for the care of nature, for the "Congresse Internationale pour la Protection des Paysages," held in Paris in 1909, was entirely devoted to the matter of protection of nature, while the congress which was held three years later in Stuttgart was more interested in home protection.

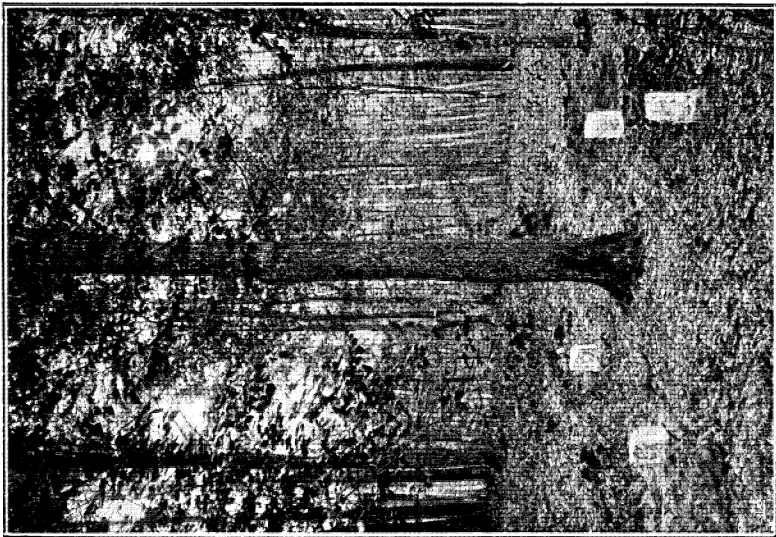
Finally the eighth International Congress of Zoologists, which was held at Graz in 1910, elected, upon the proposal of P. Sarasin, a provisional committee for the international protection of nature. This committee was composed of zoologists from different countries, and to-day we have met at Berne, representing our various governments<sup>2</sup> with the object of electing a final commission. It is to be recommended that we select from the delegates of the countries represented an *expert commission for international protection of nature*, which can meet from time to time. It should be the duty of this commission to promote international problems of protection of nature—due consideration being given to economic interests—and to endeavour to interest in this subject those countries in which as yet no protection of nature exists. Among these international problems of protection of nature, as mentioned in part above, belong the protection of nature in countries regarded as "no man's land" (Spitzbergen, the Antarctic regions, etc.); the protection of the great mammals (whales, seals, etc.) in the oceans; the protection of birds and animals in so far as the co-operation of several states is required for it, especially as regards the trade in feathers, skins, etc.; and the regulation of the trade in mountain plants in so far as several states are interested therein. It would be a mistake to try to make this commission the central point for a national protection of nature in all countries; it should, on the other hand, avoid any interference with national protection of nature. The creation of a permanent meeting-place or even of a permanent bureau would appear also to be unnecessary and inappropriate at present. All the efforts directed towards an international protection of nature should rather be undertaken by the local organisations for nature protection situated in the country where the meeting happens to be held. The benefits of mutual discussions and suggestions made by and among the delegates upon the occasions of these meetings must not be underestimated, and the general principles of Nature Protection can be most favourably promoted if the meeting-places and the presiding officers of the meetings are changed from country to country, and if each meeting be held in a different country and all international problems be discussed from a different point of view.

<sup>1</sup> **Conwentz, H.** "The Care of Natural Monuments with special reference to Great Britain and Germany." London (Cambridge University Press), 1909, pp. 174 and 178.

<sup>2</sup> Great Britain was represented by the Honourable N. Charles Rothschild.



View in the Plage Fen Reservation.



Method of marking out a protected tree: Service Tree on the border of its geographical range in West Prussia.

CONWENTZ—NATURE PROTECTION (see pp. 109—122).





Lecture Hall of the Central Institute for the Care of Natural Monuments, Berlin.



The sea-holly, under Government protection on the whole German coast.

CONWENTZ—NATURE PROTECTION (see pp. 109—122).



Fossil Forest Reservation, Victoria Park, Glasgow.



Glatzer Schneeberg Reservation: the dead forest.