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The Tragedy of the Hungarian Natural History Museum

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On the 24th October 1956 and the days that followed, during the march of events in Budapest now known all over the world, our Museum received a devastating blow such as was never yet received during its history of more then 150 years. In 1809, the Museum was transported to Nagyvárad, before the oncoming armies of Napoleon, then attacking Hungary, and from there it was brought back to the Capital after the lapse of eight months ; also destruction was near in the days of the great flood of Budapest in 1838, a part of the collection having been inundated, but the majority and also the most valuable material was successfully saved ; in January, 1945, in World War II, during the sorely trying days of the siege of Budapest, some shells hit the Museum buildings, and the Mineralogical Collection and the Ornithological Exhibition suffered considerable damages. Yet all these, in constrast to what happened now, were but insignificant episodes which meant no real losses as compared to the richness of its collections.

The recent disaster is a downright tragedy ; not only because of the quantity of the material destroyed, but primarily and mainly on the ground of its qualitative aspect. Almost wholly the victims of the conflagration in the main Museum Building became the world-known and rich Mineralogical and Geological Department, containing scientifically priceless treasures, the same as the collections of the adjacent Paleontological Department. Together with these collections, their special libraries, containing largely irreplaceable works (books, periodicals, reprints), inventories, index cards, the desks of the mineralogists and paleontologists, their instruments and manuscripts were all annihilated. Simultaneously and in the same building, the large African mammals and big game trophies (now hardly to be acquired again) of the Mammalogical Collection were burnt to mere ashes : a wide-mouthed rhinoceros, a magnificent elephant bull, chimpanzees, bongos, etc., — the most valuable pieces of the gigantic and spectacular diorama of the African Exhibition. A few days later, the Zoological Collections housed in the Museum building in the Baross Street had the same fate. The alcoholic material of the Ichthyological and Herpetological Collections in this three-floor bulding caught fire and perished in the matter of minutes. Aside of them, wholly consumed were the exceedingly valuable Ornithological and Malacological Collections, the Collection of Lower, mainly Marine Invertebrates, the Dipterological Collection and the very considerable quantity of the comparative bone material of the Mammalogical Collection. The Lepidopterological

Collection also suffered significant damages by water. In the wake of extinguishing operations and a burst main-pipe, about one-third of the Hemipterological Collection was destroyed and no small injuries were incurred from the same cause by the Coleopterological Collection, that is, by a collapsing ceiling, the Anthropological Department.

The rooms and premises where our research workers knew up to now only the delights and ardour of creative scientific work, became white-hot furnaces and in the course of a few hours the materials of collecting and scientific labours of 150 years, treasures acquired by the assiduty of an ant, were completely annihilated. More than one million inventoried objects were burnt to nothing, among them the collected materials of L. Bíró from New Guinea, of J. Xántus from southeastern Asia, of B. Széchényi, J. Zichy and G. Almássy from Central Asia of. Gy. Madarász from Ceylon and the Near East, K. Kittenberger from Africa, further the dipterological collections of Kertész and Thalhammer, with their thousands of types, as well as the Adria material of the Hungarian marine expedition by the ship Najade ; extinguishing water wrecked a significant portion of the world-famous Hemipterological Collection of Horváth. And, the same as in the Mineralogical and Paleontological Dpartments, the special libraries were also burnt down, — together with the collecting equipments, microscopes and other indispensable instruments of research work with the maniscripts of our zoologists.

Our losses are therefore enormous, as evident also from the above short enumeration, and, on the spur of the moment, I could hardly tell whether a similar blow had ever befell another museum as large as ours. I am well cognizant of the fact that bombings during World War II destroyed many a large museum building in the several areas ravaged by the war and has also annihilated materials invaluable from scientific, historical and artistical points of view. Yet a significant portion of them, indeed their most valuable and larger part were still saved and put into safety, anticipating the turn of events. In our case, there was no possibility to do so. Events took a tragic turn so unexpectedly and with such an unforeseen rapidity, that the necessity of securing our collections was never even thought of. Tragically enough, the main building of the Museum is the next but one neighbour of the starting point of the events, the broadcasting studio ; whilst the building of the Zoological Department in the Baross Street is situated in the center of the area between the Studio and the Kilián barracks, the other focal point of the fights.

So, in the undivined and incalculable course of the events, a cultural institution fell also a lamentable victim, one that is outstanding not only in Hungarian relations but known all over the world by its international connections. Consequently, I feel that let it be ever so saddening, — having related of but or results in several volumes of our Annals (1952—54, 55, 56) up to now, — I am under obligation to the world of science, and primarly to museum workers, to give an account as detailed as possible even of our losses.

The Mineralogical and Geological Department

The oldest Collections the Natural History Museum. Already in 1802, in the year of the establishment of the Museum, minerals represent, aside of the Numismatic and Antiquity Departments and the Library, the natural history collec-

tions of European fame in later times. And, from the very beginning, this is the Department that always remained, owing to the valuable material it contained, the one most jealously guarded in the Museum. Its stock approached 150 000 items at the time of the catastrophe.

Its development, especially from the 'forties of the last century, was very rapid and, up to the beginning of World War I, it became a Collection of ever greater significance, indeed of world-fame, in an almost uniform rate. Aside of its oldest pieces, its main stock consisted of the mineral collection of I. Szájbély purchased in 1839, of the crystal collection of A. Fauser bought in in 1842, and of the minerals presented by the families Brunswick—Forray—Chotek. In 1870, it was further enriched by the collection of 34 000 items purchased from J. Lobkowitz, and the gold-collection containing the most beautiful Verespatak golds of Weiss also shortly became its property. Its further augmentation is closely connected with the name of A. Semsey, the greatest Hungarian Maecenas. By almost unlimited financial generosity, he covered the purchases of various collections, so, among others, those of Eszterházy, Schuhardt, Schöffel, Frenzel, Uzlár, Lhotzky, Norpe and Spinder, and defrayed also the expenses of the purchases of rarely beautiful mineral presents, B. Széchényi, L. Lóczy and Victor Emmanuel, King of Italy, enriched the Department in a more significant measure. The latter presented the Museum with a rich marble collection. It goes without saying that the valuable material collected at home and abroad by the research workers of the Department have also contributed to the growing of the Collection. Exchange with all parts of the world, together with private and state support, our Mineralogical Department became not only the biggest Collection of Hungary but one of the richest in Europe.

A picture drawn sketchily of our losses is the following.

Wholly annihilated were the singularly beautiful diamond crystals from the Cape, Brasil and Eastern India, the very valuable copy of the crude Cullinan specimen together with the glass imitations of the biggest diamonds, all in the original color and cut. The first-class graphite specimens from Ceylon and Siberia were all pulverised. Entirely pulverised are now the finest home and abroad pieces of native tellurium, antimony, arsenic and bismuth, the specimens of native (terrastrial) iron, the rarely beautiful big crystals of native sulphur acquired from Sicily, and the same from Kálnok, Rodoboy, and the β sulphur, from Recsk, crystallized in the monocline system. Destroyed or melted together are the exquisitely fine pieces of the gold collection from Verespatak, and the same fate befell the magnificent specimens of native silver and cuprum ; of the antimonites, the famous Felsőbánya and Kisbánya pieces, as also the gigantic crystals (40 cm long 5 cm thick) from Sikoku, Japan. The destruction of the unique wehrlite crystal found in the Mts. Börzsöny is an inestimable loss. This mineral is known, namely, from this and every other place, in a massive form only. The wonderful specimens of Au., Ag., Pb., Te. minerals from the Transsylvanian Érchegység are irretrievable losses ; some of these were first described from this area (hessite, petzite, nagyágite, sylvanite, krennerite, semseyite, andorite), the famous freieslebenite and diaphorite pieces from Felsőbánya and the pirrhotine crystals from Kisbánya, the argirodite pieces containing Ge, from Freiberg. The few laurionite specimens are also a great loss ; these were formed from the prehistroic lead dross by the action of marine salts near Laurium during 2000 years. Our colorful fluorites, the cryolite and related crystals from

Ivigtut (their crystallographic characters having been worked out by Krenner) fell all before the flames.

As in every mineralogical collection, that is, Exhibition, the silicate crystals were also represented by the most variously colored and sized specimens in our Collection. None of them escaped. The large, water-clear quartz-pieces from Bourg d'Oison burst to fragments the same as the multicolored amethysts, citrines, rosequartzes, etc.

The losses suffered by our opal collection is almost inestimable. The majority of the cut opals from Vörösvágás, a collection of 366 923 pieces, containing from millet-sized to centimeter large specimens and pieces of wonderful transparency and hues, have all perished; the pieces saved have lost their color, became intransparent, opaque, and so more or less valueless. The same was the destiny of the rich precious-stone collection, containing rough and cut gems.

The finest pieces of our superb calcites were also ruined; the today irretrievable specimens of the Iceland spars from the now exhausted mines of Iceland, together with the Hungarian calcite pieces many times mentioned in literature; the wonderful rhodocrosite crystals with the Kapnikbánya specimens of world-fame, made especially famous by the accompanying helvine crystals. The destruction of our cerussite collection is also a sore loss, since the material of Hungarian localities, worked out also monographically, was also destroyed.

Numerous beautiful feldspar specimens perished too, among them crystals of egregious sizes and from various sites of the world.

A heavy loss is the destruction of a perfect beryl crystal, 0,5 m high, together with the precious stone-varieties of beryllium; among them also perfectly water-clear large emeralds, aquamarines, yellow (Takovaya, Ural) and greenish-yellow (Minas Geraes) beryl crystals were annihilated.

Perfectly shaped and large-sized crystals of the colorful garnets, represented by numerous specimens in our collection, fell also victim to the conflagration. Especially the faultlessly colored crystal of the rare uvarovite, cut into a precious stone, had a great value among them.

The flames destroyed our topazes from Miask and Mursinka, then from Brasil, together with the famous crystal of the bluish-green Brasilian euclase, the exceedingly beautiful hemimorphite pieces of Rézbánya and the exquisite specimens of our turmaline collection, among them a wonderful specimen of its pink variety, the rubellite, a crystal with complete faces, 9 cm long and 3 cm thick, found in the Isle Elba.

The mere enumeration of the several destroyed minerals is not my task, so I wish yet to point out the followings only. Together with the excellent pieces of zeolites, the rich collection of niobates and tantalates were also wholly destructed; the various phosphate and vanadate specimens, the wonderful crystals of vivianite from Óradna and Kisbánya, the marvellous skorodites from Minas Geraes, the schafarzikite specimens now no more to be found, yeremyewite and rhodizite, the great rarities of Eastern Siberia, ludwigite, known only from Vaskő, now not to be found any more; the szájbélyite from Rézbánya; the irreplaceable urvölgyite and libetenite from Libetbánya; the whole series of wonderfully formed gypsum crystals from Gánt; the curiously formed crystals of wolframite from Felsőbánya; of the organical compounds, the ajkaite, telegdite, kiscellite and elaterite.

A very big loss, not alone for the Museum but for the whole world of science, is the destruction of the meteorite collection of world fame of our Mine-

ralogical Department. This consisted of 1295 meteorite pieces from 484 localities, reviewed in a book published by the Hungarian Academy of Sciences (L. T o k o d y—M. D u d i c h: Meteorite-Collections in Hungary, 1951).

The losses of our rock collections are almost of the same rate. The rock series containing cubically cut and variously worked (on all six faces) rock specimens was a very special treasure; the same as the collection of cut rock tablets, a marble collection from Italy, and the ore deposit collection too. All these were completely annihilated.

The fire destroyed all instruments of our Mineralogical Department, from the polarizing microscopes down to the mine and oil compasses.

The special library of the Department was al o wholly burnt out; about 5 000 books with many uniques, 90 000 irreplaceable reprints, many complete periodical sets now no more to be acquired, of about 20 000 volumes.

The detailed enumeration of our losses is absolutely impossible, since aslo the inventory books and the catalogue — index cards were also burnt. The aboves are, however, more than enough to demonstrate the rate of the overall and stupefying destruction.

The Paleontological Department

The Paleontological Department, adjacent to the Mineralogical Dept., in the main Museum buildung on the Museum Boulevard, fell also victim to the fire. Its rich home and abroad material represented an invaluable scientific asset not only as regards museum purposes but also for the researches of the Hungarian Geological Institution and for University instruction.

The destroyed home material contained very many type specimens published in the Annals of our Museum, in the periodical of the Geological Institution, its Annals, and in numerous foreign publications; further, it included the stratigraphic documentation of several, now wholly exhausted, built-in, or no more accessible, localities. Its whole scientific and comparative material comprised 140 000 inventoried items. Of these, the flames destroyed 110 500 items, the loss is therefore 80 per cent. 364 boxes of inventoried objects and 28 cabinets of the best samples were annihilated. With regard to subject matter, the damages are the greatest in th invertebrate comparative material, the foreign parts of which were wholly destroyed. Concerning vertebrate material, the loss, though relatively smaller as concerns quantity, is still very grave, since the home and foreign large vertebrate fossils were completely destructed. Of the invertebrate comparative material, the whole Cambrian material from Czechoslovakia, Sweden and Australia was annihilated; further, many type specimens figured by Barrande; the very rich Silurian material originating from almost every part of Europe, but represented especially by Czechoslovakian and English finds. Of the Devonian, many valuable English and German finds; of the Carboniferous, manily German and Belgian material; of the Permian, also chiefly German finds were pulverised. A total of 32 boxes, containing Paleozoic material. 105 boxes of Triassic, Jurassic and Cretaceous, mainly German, Austrian French, Swiss, English, Eastern Indian, New Zealandian and Chinese materials were completely destroyed. Besides of material from other European areas, then from North America, East India, China and the Soviet Union, the rich and beautifully conserved finds of the Solenhofen and Holzmaden shales represented

an especial treasure, the same as the priceless Ammonites series of Switzerland, the fossil sponge collection from the English Cretaceous, and the type specimens of the Asiatic collections of L. Lóczy.

Concerning quantity, smaller amount of boxes, 65 in all, of our Cainozoic material, wholly destructed were : the systematical collection comprising the whole French Eocene, the also very rich French Oligocene, the comparative material from Austria (of the inner and outer alpic Viennese basins), the whole systematical comparative material from France (of the Bordeaux Basin), the Italian Miocene material as well as the Pliocene fossils from the adjacent countries and Italy. Their destruction is a very grave loss. Of the last collection mentioned above, it is especially worth mentioning, and is also grievous from a pietic point of view, that the material of L. Kossuth, collected during his exile in Torino, labelled by his own hand and perfect too from a systematical aspect, was also annihilated.

Of the home collections, the Permian-Carboniferous Trilobites and Brachypodes from the Mts. Bükk perished in 1 box, the Mezozoic materials from the environment of Budapest, the Mts. Pilis, the Northern-Balaton — among them that of the Mt. Jeruzsálem, — then that of the Mts. Mecsek were wholly destroyed in 31 boxes. Our Jurassic material from the Mts. Mecsek, the Northern-Balaton and the Mts. Pilis was burnt in 15 boxes. Of the fossils of the Cainozoic, a very lamentable loss is the destruction in 3 boxes of the materials from the Transdanuvian coal deposits and the cut Nummulina collection of Hantken. In the former one, there was a recent Assilina material, with type specimens ; in the latter also numerous type specimens were annihilated. Of the specially rich Miocene material in 56 boxes, the followings were wholly pulverised : the Eger material with the Lower Miocene fonds from the Wind factory by Noszky (which was published but partly), the published Tortonian type material of Hidas, the Middle-Miocene Echinodermata material, then the Pécs and Central-Transdanuvian Sarmata materials.

Further annihilated by the conflagration were 57 boxes of home and partly foreign material of the comparative vertebrate collection as well as the almost complete vertebrate material of the bone stores. Among them were the scientifically priceless *Alces* type from Solymár, the *Prodinotherium hungaricum* Éhik (type), the *Caducopsis* cranium (type) a *Hyaenodon* cranium (type) ; one of the uniques, represented by 8 specimens in the whole world only, a gigantic *Aepiornys* egg. Of the 4 *Ichthyosaurus*, that is, *Mystriosaurus*, 2 specimens were wholly destroyed, the other 2 being severely injured. Some valuable *Glyptodon* armour fragments but recently received from the Argentine were also annihilated.

A severe and grave loss is the loss of the Paleontological departmental library. Of the highly valuable, now almost inacquireable and therefore irreplacéable books, monographies and periodicals of about 10 000 volumes, only some 200 copies remained in a more or less usable condition, whilst the also very valuable reprint collection of another 10 000 items was completely burnt out.

Besides of the above mentioned materials and objects, 20 inventory volumes (1952—56), 32.000 index cards and 850 box indexes (all in three copies), 4 500 maps (largely geological survey maps in manuscripts), numerous artistical hand-painted genre-pictures of prehistorical times and primordial animal sculptures fell also victim to the flames.

The Zoological Department

The Collection of **Lower Invertebrate Animals** housed the phyla of Protozoa, Ceolentarata, Porifera, Tunicata, Echinodermata and Bryozoa, and, aside of the Protozoons, it consisted of about 50 000 specimens in 5 000 glasses.

The Protozoa collection comprised about 2 500 vials of home and about 500 vials of foreign, mainly Helgoland and Adriatic fixed plankton samples, and some 3 000 microscopic preparations. In this latter, there were 15 types and 5 new species, undescribed as yet, which, together with the burnt notes and drawings, are now, for the time being, lost for science.

The backbone of the other collection groups were the collectings of the 2 Najade expeditions on the Adriatic, further the one of I. Apáthy from Naples, of G. Kolosváry from Rovinj, Split and Kotor, and of M. Pell from Rovinj. Here were deposited the Coelenterates, sponges and echinoderms collected by Xanthus in the Indian Ocean, the same as the Coelenterate material from the Atlantic Ocean presented by professor Clark to the Museum.

The sponge material from the Adriatic (about 400 glasses), identified by Babić Krunoslav, the best marine sponge specialist, was also a great treasure, with the types of 3 new species and the Scyphomeduse *Drymonema dalmatina* Haeckel of which no more than 5—6 specimens were ever found, inclusive also its discoverer. As for the other parts of the Collection, the 100 beatuiful colonies of the endemic *Euspongilla Carteri* ssp. *balatoniensis* from the Lake Balaton was a value even in world respect.

Simultaneously with the Collection, its valuable departmental library of 200 volumes and periodicals and some 1300 reprints were also destroyed, together with the expensive microscopes, hydrobiological equipment and laboratory instruments.

The small yet very valuable **Hydrachnella Collection** of many thousand minute animals was annihilated in the room of the Orthopteroidea — Neuropteroidea Collection, immedietely adjacent to the Herpetological Collection. It contained partly conserved partly microscopis slides of home and foreign materials mainly from the collectings of Z. Szilády, E. Dudich, L. Szalay, T. Jermy, A. Gebhardt, J. Stiller, J. Zichy, E. Csiki, Gy. Almásy and L. Biró. The conserved material was placed in 90—95 Ultreform glasses and 20—25 jars ; an Ultreform glass contained 30—40 vials, a jar 15—18 ones. The number of slides was 1 350. With the latter, some 70—80 types of L. Szalay were annihilated.

Concerning the library of the collection, only some 20 books were burnt, but the loss of reprints is the more lamentable, as about 1 300 of them were reduced to ashes. A grave loss, too, is the destruction of the 3 microscopes and the various instruments of the Collection.

Into the **Orthopteriode** and **Neuropteroide Collection**, housing also the Hydracarine Collection and adjacent to the Herpetological Collection, fell the first grenade which caused the fatal fire. Owing to the strength of the explosion, the alcohol of the glass preparations fallen and broken to pieces in the Herpetological Collection was the first to burst into flames, becoming an inundating danger to demolish everything.

This small room, wherein we have transferred shortly before the tragic events the Ephemeroptera — Plecoptera — Odonata — Orthoptera — Dermaptera — Neuroptera — Trichoptera — Isoptera (Isodontia, Termitidae) collecti-

ons, turned to cinder and ashes, the same as every other room which fell before the oncoming flames. The above orders of insects were completely annihilated, a material of more than 60 000 specimens of high value. Only the foreign material of the Odonate escaped which, together with some 3 000 unidentified home and foreign Orthopterans, was fortunately left in the intact room of the departmental library.

The main material of the home collection originates, among others, from the collectings of J. Pável, J. and I. Frivaldszky, K. Chyzer, O. Herman, G. Horváth, S. Mocsáry, S. Pongrácz, S. Ujhelyi and K. Brancsik. Foreign and exotic material was presented or given to the Museum from almost every corner of the globe by L. Doleschall (Java, Amboina), K. Nendtwich (North America), J. Zichy (Turkestan), B. Széchenyi (Inner Asia), T. Duka (India), F. Hopp (Seychelles), K. Sarkady (Brasil), I. Verebélyi (Mexico), J. Xántus (Sunda, the Far East), S. Fenichel and L. Bíró (New Guinea, Australia), E. Csiki (Caucasus, Siberia, Mongolia, China).

With the Collection irretrievable specimens were lost too, hundreds of types described partly by Hungarian, partly by famous foreign specialists. The destruction of the Brancsik type material is an especially grave loss.

The **Hemiptera — Homoptera Colledction** suffered damages partly by fire partly by water. The losses have as yet not been possible to ascertain but it is fairly sure that injuries were suffered by about 40—50 000 specimens. Of these, 10—15 000 specimens were wholly destructed, the others may be qualified as severely damaged (losses of heads, legs, abdomens, wings). About 80 per cent of the damages fell on the bug, and 20 per cent on the cicade collections. Unfortunately, the heaviest losses were suffered by the main Hungarian collection of G. Horváth a material of world fame. Here, too, the highest amount of types were demolished, of which more than the half was described by G. Horváth. The number of perished types may be around 200—300 specimens. Of the departmental library, some 1 000 reprints are as good as useless.

In the **Coleopterological Collection** housed on the first floor of the Museum building on the Baross Street, not fire but extinguishing water bursting down from the second floor caused severe damages. It seeped into several boxes stored outside of cabinets and also into some boxes within one or two cabinets, it loosened specimens glued onto the labels, and, by washing off label inscriptions, it made useless a significant amount of material. Luckily, the majority of the destroyed material came from our home fauna and is therefore easily replaced. The two Curculionide boxes of the famous Reitter collection are, however, an irreplaceable loss, containing *Ceuthorrhynchini* material. Numerous types were demolished in this highly valuable material, a situation the more grave as the majority of the *Ceuthorrhynchini* material of the Reitter collection had burned down in Berlin, during its siege in 1945.

The **Lepidopterological Collection**, housed on the third floor of the Museum Building in the Baross Street, was miraculously saved. The fire devoured everything around it, yet the Collection, by fortuitous circumstances, escaped, though not without some significant losses. The flames destroyed about one halfth (400 specimens) of the cultur-historically very valuable T. Koy collection, which was brought together in the beginning of the XIX. century.

However, water used during the extinguishing operations, sweeping in through the broken windows, injured not a few boxes and lots of lepidopterons,

mostly home material. A box containing exotic material, among them some specimens of *Drurya antimachus* was destroyed in this way. Besides these, about 1 000 valuable specimens were lost. Another thousand specimens were wholly demolished for the causes that some boxes became intensely hot, or that glass fragments fall on the butterflies, pulverising them utterly. About 10 000 specimens, damaged partly by such happenings, will however possibly be saved by careful re-setting.

The damages suffered by the famous Treitschke collection are especially grievious, since some 12 of its original boxes became wet, a few specimens got broken and some suffered wing injuries.

During extinguishing, a considerable part of the departmental library also became wet or drenched.

By the destruction of the **Diptera Collection**, the irreplaceable loss will be felt as much by the Hungarian as by international science. Of the 250 000 dipterons which fell victim to the fire, only some 50 000 specimens remained, the families of the group Acalyptratae, the Anthomyidae and some smaller families of the Nematocera which were being worked on by external research associates. Nothing remained of the alcoholic fly, mite and gnat larval materials nor of the gnat and flea slides.

About one halfth of the Hungarian material of the destroyed Collection originated from the collectings of K. Kertész, Z. Szilády, Á. Soós and F. Mihályi; the other consisted of the incorporated private collections. Among the latter, by far the most valuable was the perfectly identified systematical collection of about 30 000 specimens of the Jesuite teacher J. Thalhammer. Very valuable were the collections of F. Pillich from Simontornya, of A. Ruff from Magyaróvár and of K. Sajó from Őrszentmiklós.

The palearctical dipterous material consisted mainly of the collectings of K. Kertész in Germany, of J. Thalhammer from Dalmatia and Tirol, of L. Bíró from Crete, of A. Lendl from the Near East, and of exchange and gift materials. Its majority came from the Pokorny collection from Austria.

The exotic material consisted chiefly of the collectings of Hungarian explorers about the turn of the century; the one of L. Bíró from New Guinea, of K. Kittenberger and Ö. Kovács from Africa, of E. Csiki from Asia, yet it was also considerably augmented by exchange materials and presentations. A large part of the Collection was worked out by famous specialists who described many new species, so it contained numerous types.

The number of the types lost is more than 3000 among them the types of Aldrich, Bezzi, Kertész, Kieffer, Mannheims, Pleske, Pokorny, Smitz, Stein and Strobl, and v. d. Wulp.

In the departmental library, more than 6000 books and reprints were burnt, among them the now almost irretrievable works of the classics of dipterology, those of Meigen, Loew, Robineau—Desvoidy, Theobald, etc. Together with them, notes, collecting diaries, drawings, manuscripts, and also the furniture of the Collection perished.

The **Malacological Collection** was also completely destroyed which is the more regrettable as — though it was not one of the biggest ones in the world — it surely belonged to the more significant ones with its alcoholic material for anatomical purposes, stored in 3 full-packed cabinets, and with its conchological material of 12000 species crammed in 900 boxes of 22 cabinets.

Its foundation reaches back to the 'twenties of the past century, but became important only in the 'fifties of the same, when, by the presentation of the Brunswick and the purchase of the A. Mikesz collections, its stock was raised to 2000 species and 18000 specimens. In the course of the following decades, the Collection evolved, augmented by various purchases and later by several collectings, which fell victim to the conflagration in November 1956. Among the collections that came into our possession by purchases, the most valuable and also the biggest was the collection of many thousand species of the well-known malacologist, K. Brancsik, and the one of Gy. Hazay. Two further significant collections were acquired as gifts. One of them was that of E. Kornis, preserved with extreme care, great exactitude and knowledge ; the other was that of Archduke Joseph Habsburg, a collection filling two rooms in the castle of the family in Alcsut. This collection was presented to the Museum by Joseph Habsburg jr., after the death of the Archduke.

Of the materials of the destroyed Collection, the following ones ought to be mentioned as especially valuable : 1. That part of the collectings in the Balkans and the Near East of I. Frivaldszky which found its way into the Museum. The value of this collection is inherent in the fact that of the collectings of Frivaldszky and his associates several new species came to light, recognized and named also as such by Frivaldszky himself but their description was made by Rossmässler; these descriptions, in accordance with the use of the times, were published under the authorship of Frivaldszky in the Iconographia of the former author. Today, these species have, of course, the authorship of Rossmässler. The original specimens of these species were, accordingly, deposited in our Museum which are now, however, only cotypes. 2. There were two valuable collectings from German New Guinea : one brought together by S. Fenichel, the other by L. Bíró. The former was worked out by K. Brancsik, the latter by L. Soós. 3. There was the material, worked out by Hilbert, from the Far East expedition of B. Széchényi. 4. The recent Hungarian stock collection, — based on the Carpathian shells of J. S. Petényi from the 'thirties of the past century, — consisted in its majority of the above mentioned Gy. Hazay collection and, preponderantly, of the material collected by L. Soós during several decades, — aside of the items enriching it by the collectings and presentations of external research associates and the directors of the Museum. 5. The very valuable shell collection from the Hungarian Pleistocene, collected by M. Rotarides. This contained many thousands of specimens and was under working out in the last autumn.

Together with the Collection, its departmental library also perished, down to the last item, with the exception of 3 reprints and a coincidentally lent-out book. Its total was 2.550 books and periodicals, and about 1850 reprints. It was not very voluminous, but it contained rare and valuable works, such as the Conchyliencabinet of Martini — Chemnitz, the Iconographia of Rossmässler-Kobelt, and the complete series of the Manual of Tryon-Pilsbury and numerous old and recent periodicals.

The material of the unfortunate **Ichthyological Collection** was, the same as the following one, completely destroyed by the fire. Approximately 15 000 home and foreign fishes in alcohol, then the skeleton, teeth and otolith collections all perished. Of the alcohol material, some 5 600 fishes belonged to the home fauna, collected in the Carpathians' Basin by J. Károli, I. and J. Fri-

valdszky, S. Petényi, S. Mocsáry, O. Herman, Gy. Éhik, I. Loksa, M. Rotarides, B. Hankó, F. Mihályi, A. Fejérváry, E. Dudich, L. Berinkey. The 9 400 foreign fishes originated from the collectings of J. Xántus (North Amderica, Indonesia and the Far East), L. Bíró (New Guinea), P. Titius (the Mediterranean), Gy. Leidenfrost (the Mediterreanean), T. Duka (India), L. Doleschall (Java), E. Csiki (Albania). N. Homonnay (the Mediterranean), S. Pongrácz (Poland). In the foreign material, 23, now synonymized types from the collectings of J. Xántus and described by J. Károli were lost, the same as the 6 valid types of new species and subspecies from the Near East, collected by B. Hankó. The destruction of 150 specimens of large marine fishes, skin preparations for our exhibitions, is also a lamentable loss.

The departmental library, about 1 400 now largely inacquirable books, periodicals and reprints, was also demolished.

As I have mentioned above, the **Herpetological Collection** was also completely destroyed. About 15—20 000 home preparations were demolished, originating from various areas of the Carpathians' Basin, the collectings mainly of I. Bolkay, E. Dudich, Gy. Éhik, G. and A. Fejérváry, L. Méhely, O. Geduly, S. Pongrácz, M. Vasváry and O. Dely In one word, the whole home material was destroyed, together with the almost complete herpetofauna of the adjacent territories.

An extremely great loss is the 18—20 000 foreign amphibian and reptile material which found its way into the Museum by the collectings of Gy. Almásy in Turkestan, L. Bíró in New Guinea, I. Bolkay in Yugoslavia, E. Csiki in Albania and Siberia, T. Duka in East India, G. and A. Fejérváry in Switzerland and Malta, K. Kittenberger in Africa, Gy. Madarász in Ceylon, Ö. Kovács in Abyssinia, Á. Vezényi in Brasil, J. Xántus in North America and Southeastern Asia. I have especially to mention the Alpine Newt material sent to us for working out from various collections from abroad, in which about 300 alpine newts of the Berlin Museum and some 150 specimens of the University of Bucarest were annihilated.

In the material, conserved mostly in about 16—18 000 glasses of various sizes, some 20—25 valid types were burnt, among them the unique specimen of a giant snake *(Liasis maximus)*, caught by L. Bíró and described by Werner (Ann. Mus. Nat. Hung. 1936, XXX. p. 105). A very serious loss is the destruction of the collection of beautiful snake specimens from South America, forwarded to our Museum by the Hungarian D. Klobusitzky from the Institute of Butantan ; and also the 4 New Zealand lizards *(Sphaenodon punctatus)*, presented to us by F. Werner.

A very valuable part of our herpetological material was the bone collection assembled from the skeletal portions of mainly home and foreign species, counting about 3,500—4,000 pieces, which contained, among others, skull series of newts *(Triturus alpestris)* from the Carpathian Basin and adjacent areas, and also the bone material of about lo fossil types described by Bolkay and Fejérváry. The dry preparation and skin collection, representing mainly tropical material of about 150—200 pieces, will also be replaced but by the greatest difficulties. The majority of this material was acquired by presents. Also irretrievable is a small collection of 80—100 items of frog limbs in glycerine, which was the basis of a major paper of Fejérváry, „Die phyletische Bedeutung der prähallux und vergleichend-osteologische Notizen über den Aunren-tarsus."

Aside of the furniture and collecting equipment of the Collection, also some 2 200 books, periodical volumes and about 500 reprints were burnt.

The wholly burnt out **Ornithological Collection**, though not the biggest, was still one of the most significant in Central Europe.

It contained 36 000 bird skins, of which some 20 000 originated from abroad, whilst 16 000 came from Hungary and from other areas within the Carpathians' Basin. Of its oological collection of some 22 000 carefully prepared eggs, 2 000 came from abroad, the others from our country; being the collectings preponderantly of F. Cerva, S. Lovassy, E. Agárdy, and D. Navratil. Its comparative bone collection of about 2 500 bird specimens was one of the largest bird-skeleton collections of Europe.

The main home material of the skin collection came from the captures of P. Jányi and S. J. Petényi. In the course of time, it reached its state when it was annihilated, by the collectings and presentations of G. Szikla, O. Herman, I. Chernel, Gy. Madarász, J. Csató, N. Homonnay, L. Horváth, and numerous external research associates. The more significant portions of its world material came from the following sources: the collectings of J. Xántus (California, the Great Sunda Isles), of L. Doleschall (Malaya), T. Duka (India), S. Fenichel and L. Bíró (New Guinea, Northwestern Africa), S. Scherzenlechner (Mexico), E. Holub (South Africa), K. Tóth, J. Ujhelyi, Á. Vezényi, and L. Vidéky (Brasil), O. Herman (Norway), B. Széchényi (Inner Asia), G. Briceno, Ortudo and B. Pózner (Venezuela), F. Königsegg and I. Megyaszay (Sudan), Cherie (Columbia), K. Glaszner (Cyprus), A. Everett (the Pacific Isles), K. Kittenberger (Eeast Africa), Ö. Kovács (Abyssinia), Gy. Almásy (Turkestan), Härms (Iran, Afghanistan, Livland). Gy. Madarász (Sudan, Ceylon, Dobrudscha). Many foreign birds came into our possession also from three wholesale dealers (Schlüter, Frank, Gerrard).

Best represented, of course, were the Passeriformes, among them, the Paradiseidae, further the Clamatores, Scansores, Psittaciformes, Cuculiformes, Trochilidae (of these, more than 3000 specimens). A heavy loss is the destruction, among others, of the 4 kivis from New Zealand, 2 lyre birds, 1 *Tetrao mlokosiewizi* and 1 condor. Of the extinct birds, we had specimens from two North American species: 2 migratory pigeons *(Columba migratoria)* and two Carolina parrots *(Conurus carolinensis)*.

In the skin collections, we had originally 133 types. Of these, about 70 species were valid, according to the revision of J. Greschik. By the unfinished revision of L. Horváth, the present curator of the Collection, however, only some 43 can be estimated as valid; the descriptions, with one exception (L. Horváth), of Gy. Madarász, mainly from Africa and Asia, in a lesser per cent from the Indo-Malayan and South American faunal territories.

The greatest treasures of the egg collection were the cuckoo eggs, collected in large numbers and from several clutches, and a series of 26 clutches of the marsh-sandpiper *(Tringa stagnatilis)*.

Of the departmental library, only the smaller, insignificant and most recent literature remained, which were housed in a room but slightly injured by the fire. Complete periodicals, large hand-books and old, almost irreplaceable classics were all annihilated. Among them, the almost entire volumes of The Ibis, The Auk, the Condor and the Journal für Ornithologie; the complete series

of Sharpe: Catalogue of Birds; Hartert—Steinbacher: Vögel der Paläarktischen Fauna; Naumann: Vögel Mitteleuropas; Niethammer: Deutschlands Vögelwelt; Lilford: Birds of Britain; then our whole Africa literature as well as the older and recent books on the birds of the Pacific Area; a total of 310 books and 650 reprints with 450 volumes of various periodicals.

The majority of the **Mammalogical Collection** was housed in that wing of the building which was successfully saved. So its material stored here, then in various exhibition rooms and in another repository in an adjacent building were saved, with the exception of a large part of the big game mammals of the Africa Exhibition in the main Museum building. In spite of all this, it has suffered wellnigh irroplaceable losses: 220 items of its stock were annihilated which can no more or hardly be acquired again.

In the main building of the National Museum on the Museum Boulevard, 28 stuffed big game mammals were burnt in the dioramas of the African Exhibition, such as: lions *(Panthera leo)*, chimpanzees *(Pan satyrus)*, water antelopes *(Kobus defassa)*, white rhinoceros *(Ceratotherium simum)*, bongos *(Boocerus euryceros)*, palas *(Aepyceros melampus)*, maned sheep *(Ammotragus lervia)*, Yimela *(Damaliscus corrigum jimela)*, an African elephant *(Loxodonta africana)*, a gigantic pangolin *(Manis gigantea)*, a Thomson gazelle *(Gazella Thomsoni)*, a Grant gazelle *(Gazella Granlt)*, gnus *(Connochaetes taurinus albojubatus)*, kongonis *(Bubalis cokei)*, Chapman zebras *(Equus quagga chapmani)*, northern wart hogs *(Phacochoerus africanus)*, — in the greater part the most beautiful and valuable specimens of the material collected by our famous Africa explorer and hunter, K. Kittenberger.

In the loft of the Museum building in the Baross Street, 192 items of the comparative bone material of large and medium exotic and some home mammals were destructed: whole skeletons, skulls, tusks, antlers, etc. Among them, some priceless specimens, such as the complete skeletons of the European bison *(Bison bonasus bonasus)*, the Persian lion *(Panthera leo persica)*, a capital rhino from Java *(Rhinoceros sondaicus)*, then gigantic elephants' tusks; of the home material, a wild boar skull collection of 54 pieces and 18 skulls of pedigreed domestic animals.

The Anthropological Department

Its collections suffered heavy injuries due to the caving in of the ceiling of the second floor in the Museum building of the Baross Street. The falling debris shattered some cabinets, in which, and during the moving of the saving activities, a total of 1299 skulls were destroyed, that is, became valueless for scientific research werk. In the destructed material, which contained partly published and partly the fragments of unpublished find series, the most significant are the following: Mosonszentjános, Mosonszentpéter (an Avaric graveyard of Mongoloide character), Alattyán-Tulát (Avaric), Polgár-Basatanya (aeneolithe), Oroszvár (IX—XI centuries), Sorokpolány (XI—XII centuries), Tápiószele (Scythe), Jászladány (the Bodrogkereszt culture from the Copper Age), Kökényzug (a neolithe-Körös culture).

Many of the laboratory equipments and instruments were also destroyed: various thermostates, a desiccating cabinet, sensitive thermometers; or were injured, such as an icebox and the centrifuge. A part of the anthropometrical

instruments have also deformed, becoming useless for exact measurements. Of its departmental library, some 60 valuable books and periodicals were lost.

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The review of our losses can — as I have already indicated — not be quantitatively exact, since our inventory books and index cards have all been burnt together with the Collections. All the same, I believe that it gives the actual situation and is underestimated rather than exaggerated. Nevertheless, it makes the position of an Institution readily imaginable, of one that was the hub of natural history researches and the spreading medium for education in natural history sciences for more than a century not only in home relations, but in international aspects too as one of the factors in the endeavours to understand nature. Its heavy losses are still further aggravated by the following circumstances: the magnificent traditions of the past of our Museum and the moral obligations to serve culture, the great connecting link of mankind over the boundaries of peoples, languages and political frontiers.

Yet all these circumstances are also stimulating: they only serve to redouble our readiness to act in the relation that we have to lay aside lamenting and — in spite of everything — to put both our feet on the ground again. We have already started work. By the effective help of our Government, the restoration of the buildings and the partial replacement of the destroyed installations have already begun; the collecting of the home material is busily under way, and we are working — as a distant plan — on the new Natural History Museum project, the only possibility to finally solve our rooming facility problems due solvence since long, — taking naturally into consideration the morals to be drawn from the recent tragic events.

We plan the new home of our Institution in a possibly open site, placing the alcohol-storing collections — if not in a separate building — on the uppernmost floor, and to obviate the cramming up of the collection spaces as far as possible by resorting to the pavilion system. In one word, we shall move everything, as much as we can draw on our own forces, that our Museum again become the fertile workshop of science and enlightenment.

Let me be allowed, however, to give went in this regard to my sincere hope that in this our endeavour, — and, first of all, concerning the acquisition of foreign materials and literature, — we shall not be left wholly on our own and that the solidarity which has hitherto and always united the world of science and which came to the aid of those who suffered the calamities of Nature or were maltreated by the tempests of History, will again be manifested. In all probability it will not be indifferent to the ICOM, of which we are a member, nor to the larger museums and scientific institutions, academies, libraries, research foundations, private collectors and to every friend of the people of Hungary, how and by what means we get our foothold again.

This our present Annal is a ready witness that, in spite of what happened, we are again at our working-benches, laboring without recoiling, even if frequently in extremely difficult circumstances. Yet, it is the ardent desire of not only mine, — as chief director and as the close witness in the very place of the events that threatened with the almost complete annihilation of the Museum — but of every worker of our institution that we should be able to work, undisturbed and effectively, as soon as possible and also in the future, for scientific and social progress, for international understanding and the promotion of the cause of peace.

Трагические события в Музее естествознания Венгерского Национального Музея

И. Борош, Будапешт

Автор, описавший в прежних томах Annales (Т. III. 1952 — Т. VI. 1954—Т. VI. 1955 — Т. VII. 1956) для музееведов новые выставки Музея естествознания, теперь к сожалению не докладывает о новых успехах. В данном сообщении он излагает катастрофическое разрушение музея во время известных во всем мире октябрьских и ноябрьских событий прошлого года в Будапеште, отмечая в отдельности невозместимые потери музеальных ценностей выставок или же научных коллекций. Автор приводит также соображения, от осуществления которых он надеется на новое приобретение уничтоженного материала и восстановление музея. Далее он выражает надежду, что научный мир также окажет поддержку музею в данном стремлении его.

В заключительной части статьи автор старается сделать выводы из горестных событий для будущего, которые могли бы отчасти уменьшить опасность подобного разрушения музеев.