vary in density from about 2.5 for the lightest stone, to more than eight for the heaviest iron meteorites, the increase in density is not brought about by an increase in the abundance of what have been defined as the heavy atoms, but only by a shift in the relative abundance of the light atoms. Thus in the less dense stone meteorites the average atomic percentage of oxygen, atomic weight 16, is 54.7 per cent., while that of iron, atomic weight 55.84, is 10.6 per cent. In the more dense iron meteorites, on the other hand, the percentage of oxygen is practically negligible, while that of iron has risen to 90.6 per cent.[4] A study of the densities of the elements and their compounds shows that the abundance of the elements does not seem to be related to this property. In fact the only apparent relation is to the atomic number, which indicates that the abundance relations are the result of evolution, that is of the factors involved in the formation and disintegration of the atoms.

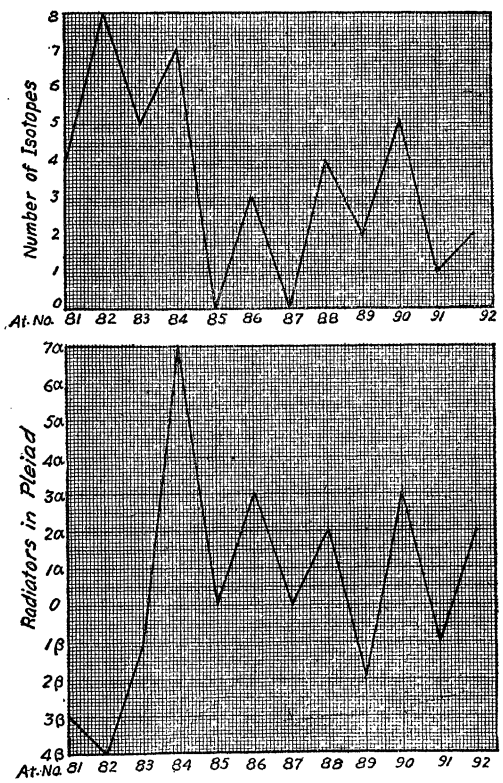


Fig. 4.

[4] For nickel, atomic weight 58.68, it is 8.5 per cent.

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Note: Since the presentation of the above paper it has been pointed out by Norris F. Hall that both the *isotopic complexity*, and the *number* of *predominant radiation* of the radio-active elements show a sharp alternation with increasing atomic number, and that this alternation is strictly in accord with the general hydrogen helium theory of atomic structure. The variation of these properties is illustrated in Figure 4 and it will be seen that the general form of these figures is the same as that of Figures 2 and 3 which represent the abundance of the elements.

## THE CARE OF WOUNDED SOLDIERS

Many matters of importance touching upon American cooperative effort and activity along medical and surgical lines were developed during the past week in Chicago, when the general medical board and the State activities committee of the medical section of the Council of National Defense held stated meetings in conjunction with the annual meeting of the Clinical Congress of Surgeons of North America. Secretary of the Navy Daniels discussed the activities of the Navy directed toward the moral and intellectual welfare of the naval personnel, and Surgeon Generals Gorgas, Braisted, and Blue spoke for the Army, Navy, and Public Health Service, outlining the medical work in these respective branches.

Surgeon General Gorgas at a meeting of the general medical board, which preceded the clinical congress, outlined the efforts now being directed toward meeting medical needs on the fields of battle, at home, and also in

transporting permanently disabled United States soldiers from abroad. Only those men will be returned home who are permanently disabled or who have a contemplated convalescence of six months. The experience of the allies, it was stated, indicates that about 10 per cent. of the wounded are permanently disabled.

On their return home the American soldiers will receive not only adequate medical treatment but will also be afforded the extra facilities of special hospitals built with the idea in view of rehabilitating physically and re-educating industrially our incapacitated soldiers. It is also contemplated to devote special hospitals in France to the treatment of special diseases, such, for example, as tuberculosis or injuries of the head, brain, eyes, ears, or face.

General Gorgas announced the fundamental policy of adhering to the Manual of 1914, which provides that the military hospitals shall consist of three general divisions, medicine, surgery, and laboratories. Under this type of organization the specialties will have full scope and yet come under adequate medical or surgical control and direction.

The Clinical Congress of Surgeons of North America is an organization founded seven years ago by Dr. Franklin H. Martin, of the advisory commission of the Council of National Defense, of Chicago. Surgical demonstrations were held at 25 important Chicago hospitals and programs were arranged almost exclusively along medico-military lines.

France was represented by Colonel C. Dercle and England by Colonel T. H. Goodwin, R. A. M. C. Sir Berkeley Moynihan presented the activities of the British Army and Major George W. Crile, M. R. C., detailed the American medical activities in France.

After Colonels E. L. Munson and F. F. Russell had outlined the work of the Surgeon General's office in organizing the medical officers' training camps and the various military laboratories, Sir Berkeley Moynihan contributed an exposition of wound treatment in the British Army. He explained in detail the search for satisfactory antiseptic drugs and ventured the novel axiom that wounds did best when merely carefully cleaned, put at rest, and kept free from contact with any drug or antiseptic. His address attracted much attention because it was the first authoritative denial of the universal efficacy of the now famous Carrel-Dakin technique of wound treatment.

Major G. W. Crile, in discussing the address of Sir Berkeley, corroborated all that he said. Short addresses were made by Drs. Edward Martin, E. H. Dunham, and W. E. Lee, all of Philadelphia. By means of a moving-picture demonstration and the detailing of experimental and clinical data, they showed how much could be done for clean wound healing by the new antiseptic, Dichloramine-T, which is being investigated under instructions from the Surgeon General's office. Dr. William O'Neill Sherman, who presented evidence of the efficacy of the Dakin-Carrel method of wound treatment, closed the Tuesday evening program.

In addition to the usual committee reports, the meeting of the general medical board was livened by two instructive reports from Sir Berkeley and Major Crile. Sir Berkeley showed the remarkable efficiency developed by the Medical Corps of the British forces, and this despite the fact that 96 per cent. of the doctors were civilian physicians at the outbreak of the war. This efficiency is attributable, among other things, to the two important factors of "surgical teamwork" and surgical consultants. The principle of surgical teamwork was learned in the United States, said Sir Berkeley, and the principle of consultants (these consultants are picked from the leading surgical minds of Britain) was evolved from the necessity of having some one authoritative group to direct and correlate medical activities consecutively from the field dressing stations back to the base hospital.

Major Crile outlined this plan for the so-called clinical sector, which in brief is made up of a team of men, selected preferably from a university or hospital where they have previously worked in unison, and now distributed among the dressing, field, evacuation, and

base hospitals of a given sector at the front. The object of such a unit is to secure at all times uniformity and continuity of oversight in the treatment of the wounded from the time of the first field dressing to the completion of convalescence.

At the meetings of the States activities committee resolutions were introduced and acted upon in regard to the universal training of young men above 19 for a period of six months, for the rehabilitation of rejected physically defective conscripts, and for the prophylaxis, control, and treatment of venereal disease.

## DEATHS AMONG ORNITHOLOGISTS

The *Auk* publishes obituary notices of several ornithologists who have died recently from which we take the following facts:

Dr. Emil August Goeldi died suddenly at Bern, Switzerland, July 5, 1917, in the fifty-eighth year of his age. He was born at Ennetbühl, Canton of St. Gall, Switzerland, August 28, 1859. He studied at the Zoological Station at Naples and was assistant of Professor Ernst Haeckel at the Zoological Institute at Jena. In 1884 he went to Brazil and became associated with the museum in Rio de Janeiro. After the fall of the Emperor Dom Pedro II., in 1889, he retired from this position and lived for four years in the state of Rio de Janeiro. About 1894 he founded the museum in Para, now known as the Museu Goeldi. This institution which comprised not only a museum but also a zoological garden and a botanical garden was taken over by the state a few years later and Goeldi then became honorary director. In 1905, after twenty years of life in the tropics, he returned to Switzerland and took up his residence in Bern where, since 1908, he has been professor of zoology in the Cantonal University. He visited the United States in August, 1907, at the time of the meeting of the Seventh International Congress of Zoology in Boston. Dr. Goeldi has published a number of papers in English, German and Portuguese on various branches of zoology, but chiefly on mammals, birds and fishes.

Alfred John North died of heart failure at Sydney, Australia, May 6, 1917, only five months after the death of his former chief and associate, Dr. E. P. Ramsay. He was born in North Melbourne, Australia, June 11, 1855, and was educated in the public and grammar schools of Melbourne. Later he worked at the jeweler's trade for some years. At an early age he developed an interest in ornithology which was stimulated by visits to the National Museum at Melbourne and by the officers of this institution, Sir Frederick McCoy the director, and John Leadbeater in charge of ornithology. In 1878 he corresponded with Ramsay and eight years later went to Sidney to arrange the Ramsay collection of birds and the collection of eggs of the Australian Museum. After spending several months at this task he was asked to prepare the "Descriptive Catalogue of the Nests and Eggs of Birds found Breeding in Australia and Tasmania" which was published in 1889. About this time he was appointed an assistant to the curator, Dr. Ramsay, and in 1891 was made ornithologist of the museum, a position which he retained until his death. He has published many papers on the birds of Australia.

Rev. William Rogers Lord died in Dover, Mass., February 2, 1916, in the sixty-ninth year of his age. He was born in Boston, Mass., May 6, 1847. He graduated from Amherst College with the degree of A.B., in 1875 and from the Union Theological Seminary, in New York, in 1878, and had held pastorates in the East and in the West.

Mr. Lord was deeply interested in birds and especially in popularizing bird study and bird protection.

Dr. Bert Heald Bailey died at Cedar Rapids, Iowa, June 22, 1917. He was born at Farley, Iowa, May 2, 1875. Dr. Bailey graduated from Coe College in 1897 and received his master's degree from the same institution in 1900. In 1900 he also completed his course and received an M.D. degree from Rush Medical College, Chicago. In September, 1900, he became professor of zoology and curator of the Museum of Coe College, a position which he held at the time of his death.