The top surface of the bench would, under these conditions, represent the surface of the sand plain lowered to its present position by the subsurface flowage of the underlying clay bed. Any evidence of the clay bulge in the river channel could long since have been ruined by the river.

The fact that slides of this type have occurred in the past in the valley of the Bouquet River was substantiated by a talk with Dr. Stafford, a physician at Essex, who said that a similar one had occurred near Whallonsburg about seventy-five or eighty years ago.

It is therefore suggested that people working in regions of unconsolidated sediments where the same type of subsurface conditions exist, give careful consideration to this alternative before they described occasional benches as river terraces.

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HATCHING OF THE EGGS OF THE "FAIRY SHRIMP"

BECAUSE of their occurrence always in temporary pools which are dry during the summer months the belief has arisen that the eggs of the "fairy shrimp" *Eubranchipus vernalis* will hatch only after a more or less prolonged period of desiccation and possibly only after they have been frozen. To my knowledge there is for any of the American species of this genus no record of their hatching having been observed under laboratory conditions. Although others have recorded the hatching of the eggs of related European forms without their having been dried,[1] it is of some interest to record the hatching of *Eubranchipus* eggs under laboratory conditions which have precluded the possibility of drying or freezing, even if the instance was entirely accidental and only one specimen was observed which attained a size which made it clearly recognizable as this form.

In March, 1937, mature *Eubranchipus,* the females bearing eggs, were placed in an aquarium used for the "conditioning" of tap water for use in other cultures. About three fourths of the water had been withdrawn from this aquarium at intervals of approximately two weeks for use in other cultures. These animals died within ten days, releasing eggs before or at the time of death. In late January of this year a single specimen fully a centimeter in length was discovered in this aquarium. It was observed daily over a period of about three weeks until it died, no apparent growth having taken place in that interval. It is not surprising that more individuals were not found, if more were hatched, as no care is taken in siphoning off water to see that small swimming forms are not removed. It is rather surprising that this individual remained and found sufficient food for growth to the size observed. The development of this form is known to be through a nauplius stage,[2] and to attain the size and degree of development observed hatching must have taken place a number of weeks previously, near to the time believed to occur for individuals in nature in this latitude.

Factors which induce the hatching of Phyllopod "resting" eggs are obscure. It is known for some Cladocera[3] that changing the culture medium sometimes induces resting eggs to hatch without the expected period of dormancy found in nature. It may be that the periodic changing of water was of importance in this instance. There is no evidence in this case of any factor which might induce hatching prior to the normal resting period of some eight months that occurs in nature. It seems clear, however, that drying or freezing are not indispensable factors, as the possibility of either is precluded in this instance.

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SOCIETIES AND MEETINGS

THE FIFTIETH ANNIVERSARY OF THE AMERICAN ASSOCIATION OF ANATOMISTS
1888–1938

ON the 17th of September, 1888, in response to the invitation of Dr. Alex. H. P. Leuf, of Brooklyn, who had lately moved to Philadelphia, fourteen gentlemen attending the Congress of American Physicians and Surgeons in Washington, met at Georgetown University and organized the American Association of Anatomists. "Eminent professors declared that this new society was not needed; while others were convinced that it would be a difficult matter to fill the necessary offices." Fifty years have passed; and on April 14 to 16, the association, now the largest of the national anatomical societies, with a membership exceeding 600, celebrated its jubilee, at the University of Pittsburgh.

At the opening session, the large auditorium of the Mellon Institute was filled to capacity as six former presidents reported their current investigations, indicating something of the range of interests now comprised under "anatomy." First, Dr. Harrison, experimenting on Amblystoma, analyzed four factors concerned in the normal development of the ear—epidermis, mesoderm, hind-brain and position of the rudiment—assigning to each its relative importance.

[1] Mathias, *Bull. Soc. Zool. France,* 54: 342–344, 1929.

[2] Dawydoff, "Embryologie des Invertebres," 1928.

[3] Wood and Banta, *Intern. Rev. d. gesamten Hydrobiologie und Hydrographie,* 35: 229–242, 1937.

Dr. Bensley then described an extract of protoplasm which produces, on dilution, acidification or dialysis, a fibrous mass microscopically like the fibers of subcutaneous connective tissue: this substance he names plasmosin. Dr. Jackson, by weighing the various organs of underfed rats, has determined which organs suffer most; and has found that on refeeding, the variable rates of gain are such that ultimately the several organs resume nearly normal proportions. Dr. Sabin reported on the cellular reaction of healthy guinea pigs to tuberculo-protein—a reaction greatly enhanced by the addition of tuberculo-phosphatide, which acts as a potent sensitizing agent. Dr. Streeter dealt with classical embryology, discussing the origin of the entoderm in macaques. The successful sectioning of an implanting chimpanzee embryo, younger than any available human specimen, led several anatomists to visit his laboratory en route to and from the meeting. The morning session concluded with Dr. Stockard's account of the developmental independence of the upper and lower jaws as shown in hybrid races of dogs, the undershot and overshot products being "morphologic misfits and physiologic failures," with counterparts in human development. Later in the meeting Dr. Warren Lewis, absent in Philadelphia to receive, with Mrs. Lewis, the Gerhard medal for "eminent work in pathology," presented his motion picture of the distinctive behavior of lymphocytes and monocytes in tissue cultures. Dr. Herbert M. Evans also reported later, on experimental deciduomata stimulated by lactogenic and adrenocorticotropic hormones. These former presidents were allowed longer than the routine ten minutes.

Five simultaneous sessions for the reading of papers were held on Thursday afternoon, and again on Friday morning. There were round-table discussions in endocrinology, Dr. Allen, chairman; in gross anatomy—"some aspects of the pelvis and vertebral column," Dr. Meyer, chairman; in neurology, Dr. Hinsey; and in haematology, Dr. Downey. Two hundred and eight papers and 68 demonstrations—nine of them motion pictures—produced an overcrowded three-day program, and a committee was authorized to deal with this increasingly difficult problem.

On Thursday evening, preceding a lively and protracted "smoker," the Anatomists attended the annual public lecture of the American Association of Physical Anthropologists. Professor Weidenreich, of the Peiping Union Medical College, spoke on *Sinanthropus pekinensis*. His superb lantern slides of the skulls of gorilla, sinanthropus and man, seen from every angle, might well impress the public that the Peking man was the long-sought intermediary, and a final demonstration of human evolution.

The annniversary dinner of the Anatomists, at the Hotel Schenley, on Friday, April 15, was a gala occasion, with 243 in attendance. Chancellor John G. Bowman, of the University of Pittsburgh, welcomed the visitors and commented on the university's Cathedral of Learning, the tallest schoolhouse in the world, towering 535 feet, and daringly designed to express through Gothic architecture the spirit or purpose of the university. In a few of its hundreds of rooms the sessions of the Anatomists were commodiously accommodated.

From the White House, Washington, the Anatomists received the following letter, from the President:

To the American Association of Anatomists I wish to convey my warm congratulations on the completion of fifty years of activity as a scientific body.

Perhaps yours, more than any other scientific discipline, combines the rigors of an exact science with the latitude of a biological science. Anatomy, including comparative anatomy, forms the framework on which numerous other sciences are based. Though many of your number have been active in fields which a few decades ago may not have been thought of, by some, as explicitly anatomical, you have maintained cohesion, and in your ranks are numbered leaders in anatomical knowledge and discovery.

We continually and vitally need your help in maintaining and increasing the body of anatomical knowledge available, and the American public will be the gainer if your organization will keep intact this history of service.

(Signed) FRANKLIN D. ROOSEVELT

And the association replied:

Mr. President:

Stirred by your message of encouragement and congratulation, the American Association of Anatomists, celebrating its fiftieth anniversary in Pittsburgh's Cathedral of Learning, will renew its efforts to meet its biological problems.

Multum adhuc restat operis, multumque restabit.

In cordial response to your interest in our welfare,

For the Association,

GEORGE W. CORNER, *Secretary*

Cordial greetings were received from Secretary von Eggeling of the Anatomische Gesellschaft, with a photograph of its Königsberg session of 1937. For that entire meeting, to the honor of American Anatomists, the Gesellschaft had appointed Dr. Harrison president. It was recalled that Kölliker was the first president of the German Anatomists, with Gegenbaur, His and Waldeyer, vice-presidents, all of whom had been made honorary members of the American Association. Nothing should stand in the way of perpetuating this traditional friendship, ardently cherished by both organizations. In an official communication sent with "herzlichste Glückwünsche," Secretary von Eggeling continues:

Die American Association of Anatomists kann heute mit Stolz und Befriedigung auf die gewaltigen Erfolge ihrer fünfzigjährigen wissenschaftlichen Arbeit zurückblicken.

Dabei haben sich mannigfache, fruchtbringende und freundschaftliche Beziehungen zu der Anatomischen Gesellschaft herausgebildet, die wir sehr hochschätzen. Es ist unser aufrichtiger Wunsch, dass sie auch in Zukunft erhalten bleiben und sich weiter noch immer enger gestalten mögen.

The Polish Society of Anatomy and Zoology, through its president, Dr. Hoyer, and its secretary, Dr. Loth, sent, with several volumes of its Proceedings, "best wishes for the fiftieth anniversary: may the coming period be one of full prosperity to your Association." Report was made of the members we have in common with the Association des Anatomistes, the Società Italiana, and other national societies of anatomists, with whose activities the American Anatomists would keep in closest touch. But next of kin is the Anatomical Society of Great Britain and Ireland, "1 year, 4 months and 11 days, our senior," whose "cordial and fraternal greetings" were very happily expressed at Pittsburgh by Dr. John Beattie, their delegate.

The after-dinner speakers then reviewed the history of the American Association, which the president, Dr. Frederic T. Lewis, had divided into three periods. The first, extending from the foundation in 1888, through the 14th session, in 1900, at Johns Hopkins University, ended with the establishment of the *American Journal of Anatomy*. It was a coming of age. The presidents had been successively Leidy, Allen, Dwight, Baker, Wilder and Huntington, and the predominant interest was gross human anatomy. It happens that none of the fourteen who attended the first session survives. Professor McMurrich, present at the second session, recalled our first president, Dr. Leidy, "as one of our greatest native naturalists—anatomist, zoologist and paleontologist—a man of the most charming simplicity." Finely characterized in a bronze commemorative medal, coined for this anniversary, Leidy is portrayed by our colleague, Dr. R. Tait McKenzie, as initiating "fifty years of achievement."

The association's second period begins in 1901 with Dr. Huntington's second term as president, and extends to the armistice year, 1918, in which no meeting was held. During that time the Association's chief interest was in embryology. Its policies were molded by a triumvirate of leading spirits—Huntington, Minot, and Mall. Thus Professor McClure described these friends of his, in reminiscence of this expanding period. They served in turn as presidents, being followed by McMurrich, Piersol, Harrison, Huber and Donaldson. On the screen, portraits were shown of all former presidents now deceased, and their work was briefly presented. With great regret the Association paid its tribute to Dr. Donaldson, its most recent loss, recalling the gracious and scholarly manner in which so often he presented to the Society the substantial results of his careful researches.

The third period, with the rise of endocrinology, experimental embryology and histology, and a sustained and growing interest in neurology, is that of the present day. Dr. Weed dealt with it lightly, picturing the Association from the Secretary's viewpoint. He described "the frantic days of arranging the program and editing the abstracts"—when indeed the Secretary must serve as "Concertmeister, naming the people he would place among the first violins—the petulant cornetists, the blatant trumpeters.—Who among us plays the piccolo?"

It was observed, by the president, that the semicentennial of the American Anatomists coincides with the centennial of Schwann's *Untersuchungen*. In 1838, with a title page usually discarded, Theodor Schwann published all that was essential for his cell theory, ending Heft 1 in the midst of a sentence—"In diesem Cytoblastem, nicht." Huxley judged rightly—"Whatever cavillers may say, it is certain that histology before 1838 and histology since then are two different sciences, in scope, in purpose, and in dignity." Hence the American Association paid its tribute of admiration to Schwann and his associates—leaders in anatomy's advance.

Dr. Evans, in forecasting our future, noted that 1838 was exactly four centuries from the *Tabulae Sex* of Vesalius, the work of that "lithe youngster whose family crest was the weasel." Yet there remains as "our predominant task, the determination of the role which structural arrangements play in the understanding of life processes—this is to-day's position of anatomic inquiry, and it also connotes the direction of our movement."

Many another feature of the celebration might be mentioned—the participation of women in the association: two members in the first period, distinguished, but still inarticulate; 4 per cent. of the membership in 1903, and active participants; 9 per cent. at the present time. Letters were received from Dr. Coghill, president from 1932 to 1934, who found it inadvisable to attend, and from Dr. Gage, recalling the third session. The cordial good wishes of the association were conveyed to them by telegram. Finally, at the dinner, on the retirement of Dr. Corner from the secretaryship after eight years of service, a small glass Graeco-Roman pitcher of the 1st or 2nd century B.C. was presented to him, with the comment: "The labors of the Secretary of this Association require sacrifice. They take valuable time and curtail research. Often the results are considered transient and much of the labor lost. But sometimes there is surprising permanency in presumably fragile products. Hardly did the craftsman who made this pitcher before Galen was puzzling over the lymphatics suspect its fate. We present it to

Secretary Corner to suggest our confidence that this work for us shall endure. The Association is not unmindful of his eight years of devoted and successful service."

The concluding session on Saturday afternoon was held jointly with the Physical Anthropologists. There were three valuable papers of some length from each association. Especially noteworthy was Dr. Hrdlička's exhibition of a series of human tibiae having a large and long subcondylar process hitherto unreported, and still unexplained. Dr. Hrdlička remarked that all the major human bones have macroscopic features as yet undescribed. The final paper, by Dr. Edwards, showed how the distribution of the five pigments or color factors of the human skin may be recorded in life, by spectro-photometric measurements.

At the business meeting, 43 new members were received. Officers for 1939 and 1940 were elected as follows: *President,* Stephen W. Ranson; *First Vice-president,* T. Wingate Todd; *Second Vice-president,* Albert Kuntz; for 1939–1943, *Secretary-Treasurer,* Eliot R. Clark; *Members of the Executive Committee,* George W. Corner, Olof Larsell. A cordial invitation in behalf of the Faculties of the three Medical Schools in Boston—Boston University, Harvard and Tufts—was received from Dean Burwell; and accordingly the Anatomists will meet next year at the Harvard Medical School, in Boston, from April 6 to 8, 1939.

FREDERIC T. LEWIS
GEORGE W. CORNER

EASTERN SECTION OF THE SEISMOLOGICAL SOCIETY OF AMERICA

FOLLOWING the meeting of the American Geophysical Union in Washington, D. C., the Eastern Section of the Seismological Society of America held its thirteenth annual meeting at the Massachusetts Institute of Technology, Cambridge, Massachusetts, and Weston College, Weston, Massachusetts, on May 2 and 3, 1938.

The vice-president, Dr. Dean Vannevar Bush, in the name of Dr. K. T. Compton, welcomed the group to the Massachusetts Institute of Technology and expressed the hope that the excellent work being done in the field of seismology would very soon obtain a more wide-spread recognition on the part of the general public.

After the usual business routine, the reports of the various permanent and standing committees and the appointment of new committees, the first twelve scientific papers were presented. Following a luncheon in the Walker Memorial Building, as guests of the department of geology, a trip of inspection was made. This included an examination of the differential analyzer and a visit to the electrical engineering department shops, where a much larger and improved type analyzer is being constructed. The seismologists next examined Professor A. C. Ruge's shaking-table equipment and L. B. Slichter's new type portable seismographs. Moving over to Harvard, the Bridgman high pressure apparatus, the Birch equipment for the determination of velocities and a modern portable seismic outfit were successively inspected.

The sessions of May 3 were held at Weston, where after a brief address of welcome by the Reverend R. A. Hewitt, S.J., president of Weston College, the second group of ten papers was read and the officers for the ensuing year were elected as follows: *Chairman:* H. E. McComb, of the U. S. Coast and Geodetic Survey; *Vice-Chairman:* A. C. Ruge, of the Department of Civil Engineering, Massachusetts Institute of Technology; *Secretary:* A. J. Westland, S.J., Department of Geophysics, Saint Louis University; *Treasurer:* A. C. Chick, of Providence, R. I.; *Fifth Member of Executive Committee:* E. C. Jacobs, of the University of Vermont.

Weston College was host at the luncheon which terminated the activities of the morning. In the afternoon a visit was made to the elaborate new seismic vault at the college. Four papers were next read concerning the Benioff seismograph, and a round-table discussion followed on the Benioff operation, with Dr. E. A. Hodgson, of the Dominion Observatory, Canada, as chairman. The meeting was brought to a close with a visit to the Harvard Station at Oak Ridge to inspect the seismograph equipment there, and the 61-inch reflecting telescope of the Astronomical Observatory.

A. J. WESTLAND,
Secretary

SPECIAL ARTICLES

VITAMIN A AND ROD-CONE DARK ADAPTATION IN CIRRHOSIS OF THE LIVER[1]

DISTURBANCES in vision such as nightblindness have long been associated with malnutrition,[2] and in recent years this has been shown to be due specifically to variations in the vitamin A content of the body.[3] Lately, this relationship has received a rational understanding in terms of the association of vitamin A with the chemical structure of visual purple, the light-sensitive substance of the rods.[4]

It has generally been assumed that disturbances in

[1] Reported at the Symposium on Biophysics held at the University of Pennsylvania on November 6, 1937.

[2] H. de Gouvea, *Arch. f. Ophthalm.,* 29 (1): 163, 1883.

[3] L. S. Fridericia and E. Holm, *Am. Jour. Physiol.,* 73: 63, 1925; K. Tansley, *Jour. Physiol.,* 71: 442, 1931.

[4] G. Wald, *Jour. Gen. Physiol.,* 19: 351, 1935.