

BIOLOGY

Potentialities Unlimited

● "ONLY a minute fraction of the universe, it appears, has as yet brought forth life. The elementary constituents of the universe, it is certain, are of such a nature that they can and do bring forth life when combined in certain ways. But in only a very small proportion of them have these combinations thus far been formed. Even on our earth, it is but a thin rind that has brought forth life. And, according to the views of some modern astronomers, the conditions for life seem to be present in but few of the heavenly bodies. Yet since the constituents of the universe are of a nature to produce life when rightly combined, the remainder, or some part of the remainder, need but enter into such combinations in order to bring forth life on a vaster scale than has yet occurred."—H. S. Jennings in *THE UNIVERSE AND LIFE* (Yale Univ. Press).

Science News Letter, October 21, 1933

ENGINEERING

Growing Into Gianthood

● "AS recently as 1922, the present systems of air conditioning were perfected, so that efficient and automatic equipment became commercially available. In fact, it may be said that only thirty years ago very little was known about the theory and practice of air conditioning; and it was as the result of the research and mechanical ingenuity of Willis Carrier that present accomplishments in this field have been made possible. . . There are many reasons to expect that during the next few years there will be an enormous increase in the number of installations of air-conditioning equipment in public buildings, factories and residences. In fact, it is likely that there will be an expansion in the air-conditioning industry during the next decade that will be comparable with the great expansion in the automobile industry from 1919 to 1929."—James A. Moyer and Raymond U. Fittz in *AIR CONDITIONING* (McGraw-Hill).

Science News Letter, October 21, 1933

EDUCATION

Crisis in Education

● "THERE is at present a crisis in education. Obviously there is a crisis financially. But such restriction of resources has only emphasized a confusion already apparent. A conventional school neither understands nor has any program with reference to child devel-

opment. And even in the task which it considers central, the furthering of formal learning, it seems extraordinarily inefficient. There is danger that the current increases in teaching load, the lack of equipment, and the frequent shortening of the school year, together with a lowering of professional morale (due to the greater burdens and greater uncertainties to which teachers are subjected, plus the extension of cancerous political influence) may cause a general educational deterioration.—S. L. Pressey in *PSYCHOLOGY AND THE NEW EDUCATION* (Harper).

Science News Letter, October 21, 1933

ASTRONOMY-BIOGRAPHY

Seeing Without Eyes

● "WITH A GOOD memory and an adequate imagination one can see much without the use of the eyes. . . . It has not seemed quite fair play that I should be expected to pose as a blind man just because I lost my sight after middle age and found ways of carrying on despite the handicap. It so happened that I had given careful attention to the phenomena of Nature, and had traveled considerably, and had stored away many imperishable memories. I often say that I should have no cause for complaint, as I perhaps have been privileged to see more than is allotted to the average individual."—Edwin Brant Frost in *AN ASTRONOMER'S LIFE* (Houghton Mifflin).

Science News Letter, October 21, 1933

SOCIAL SCIENCE

Conduct

● "NOTHING influences our conduct less than do intellectual ideas."—C. G. Jung in *MODERN MAN IN SEARCH OF A SOUL* (Harcourt, Brace).

Science News Letter, October 21, 1933

EXPLORATION

Arctic Diet

● "IN THE ARDUOUS journey out and the still harder days of climbing, mostly full ten-hour days too, the daily food consisted of:

Breakfast: 1½ oz. oats, ½ biscuit, cup of tea; Lunch: 1 biscuit, 2 oz. chocolate, cup of lemon juice; Supper; 5 oz. pemmican, 2 oz. pea flour, ½ biscuit, cup of cocoa; as well as the inevitable spoonful of cod-liver oil each day. That is about 20 oz. per diem, yet they felt perfectly satisfied and fit."—F. Spencer Chapman in *NORTHERN LIGHTS* (Oxford Univ. Press).

Science News Letter, October 21, 1933

THE AUT

AVIATION

Night Flying

● "TO THE PASSENGER night travel has a fascination not felt by those who travel only by daylight. In mountainous country the dim outlines of the near-by masses rise up bold and black beside the course and seem far greater than under the glare of the sun. With the gradual waning of the evening light the exhaust from the motors alongside the cabin spits out sheets of flame which throw a lurid glow upon the wings and struts just outside of the window. The flashing beacons off at one side are then easily seen, and to the night traveler over the desert they constitute the only features of interest outside of the cabin."—A. K. Lobeck in *AIRWAYS OF AMERICA* (Geographical Press, Columbia Univ.).

Science News Letter, October 21, 1933

BIOLOGY

Disowning Green "Animals"

● "WE ARE still tied firmly to the old tradition that animals move and plants are quiescent, and a chlorophyll-bearing organism, if actively moving, is *ipse facto* an animal. Were I to advocate this as the main distinction between animals and plants, there would be, undoubtedly, a storm of protests from all biologists. And yet, what other characteristics do chlorophyll-forming organisms have to justify us in claiming them as animals? At the present time there is a double taxonomic system, one botanical, the other zoological for these questionable forms, and these systems are widely different. We can avoid the resulting confusion by adopting one or the other system of classification. My own conviction is that zoologists should follow the historical precedent furnished in the last century by the elimination from Protozoa of filamentous algae, desmids and diatoms, and now transfer to the botanists the entire aggregate of so-called Protozoa in which the ability to form chlorophyll is a characteristic."—Gary N. Calkins in *THE BIOLOGY OF THE PROTOZOA* (Lea & Febiger).

Science News Letter, October 21, 1933

HORS SAY:

MILITARY SCIENCE

What a Bombardment Costs

● "IN THE Third Battle of Ypres, which took place during the summer and autumn of 1917, the British fired 4,282,550 shells, costing £22,000,000, in the preliminary bombardments *before the battle opened*. This number of shells represents 107,000 tons, which translated into terms of transportation means: 27 four-thousand ton shiploads; 540 four-hundred ton trainloads (in England and France) and 35,666 three-ton lorry-loads."—Maj-Gen. J. F. C. Fuller in *WHAT WOULD BE THE CHARACTER OF A NEW WAR?* (*Harrison Smith and Robert Haas*).

Science News Letter, October 21, 1933

PSYCHOLOGY

A Price on Success

● "CERTAINLY the child should be encouraged with praise and approval; he should receive unmistakable evidence of the satisfaction which the parents feel over his efforts and application. To pay in cash for success in carrying out his daily tasks, however, is to give the child a false view of his obligations, a false motive for his efforts, and a false scale of values and relationships. Perhaps we can see this more clearly when we consider the corresponding practice of fining or penalizing a child for deficiencies or failures. What would be a fair amount of fine for a child to pay for having failed in geography? What price history or grammar?"—S. M. and B. C. Gruenberg in *PARENTS, CHILDREN, AND MONEY* (*Viking Press*).

Science News Letter, October 21, 1933

GEOGRAPHY

Singing Sands

● "QUITE SUDDENLY the great amphitheatre began to boom and drone with a sound not unlike that of a siren or perhaps an aeroplane engine—quite a musical, pleasing, rhythmic sound of astonishing depth. Only once before had I heard the phenomenon of the famous 'Singing Sands'—near the tumbled dunes of Badr between Yanbu' and Madina in July, 1928,—but on that occasion I had heard them only from

afar. Here at Naifa the conditions were ideal for the study of the sand concert, and the first item was sufficiently prolonged—it lasted perhaps about four minutes—for me to recover from my surprise and take in every detail. . . . The key to the situation was Sa'dan, seated on the top of the slope. It was evident that the music was being engendered by the sand sliding down the steep slope from under him. . . . When he came down, having had enough of that form of amusement, I went up in his place armed with a bottle (to collect a sample of the sand), note-book and watch."—H. St. J. B. Philby in *THE EMPTY QUARTER* (*Holt*).

Science News Letter, October 21, 1933

BOTANY

Sugar and Spice

● "BUT A SPECIES which depends upon environment to settle its sex problem is in great danger of extermination. All of the individuals living close enough together to mate are apt to be of the same sex since they live under very much the same conditions. What would become of the Mexicans if hot pepper and hot weather made girls? What would happen to America if the codliver oil and sun baths it is the fashion nowadays to give babies made boys? Probably the United States would annex Mexico, but a similar situation in plants could not be so easily remedied."—Wilfred W. Robbins and Helen M. Pearson in *SEX IN THE PLANT WORLD* (*Appleton-Century*).

Science News Letter, October 21, 1933

ECONOMICS

Our Greatest Fault

● "OUR present marketing system is under a heavy fire of adverse criticism. Publicists and economists have been at pains to point out its weaknesses and extravagances. Industrialists appreciate that distribution has lagged far behind the progress made by production and that it holds many opportunities to increase efficiency and to effect economy. The growth of the big department stores, the mail order houses, the chain stores, and the plans to eliminate all sorts of middlemen—jobbers, sales agents, commission men, brokers—are but different phases of the effort to cut distribution costs by simplifying the marketing process."—Williams Haynes in *CHEMICAL ECONOMICS* (*Van Nostrand*).

Science News Letter, October 21, 1933

ANTHROPOLOGY

Superior Beasts

● "RETURNING now to man's superiority as a reasoner, Charron follows the theriophilic tradition in disparaging reason. Most of our woes come from it; vice, passion, illness, irresolution, worry, despair. Beasts, as the animals in Gelli's *Circe* pointed out, have no fear of the future, whereas man cannot escape it. Our supposed advantage, resident in our power to command them, simply does not exist: we fear them more than they do us. Nor are we free and they in servitude, as is sometimes maintained, for we have slaves, they none. Moreover men war on one another; they live in peace. Nor are we more virtuous than they, at least not materially, whatever we may be formally. They are more friendly, faithful, and magnanimous than we, nor is any beast so unjust, thankless, treacherous, perfidious, and deceitful as man."—George Boas in *THE HAPPY BEAST* (*Johns Hopkins Press*).

Science News Letter, October 21, 1933

ARCHAEOLOGY

Not Mere Museum Science

● "BUT JUST as one can stultify Homer by too much insistence on the Aeolic dialect and the peculiarities of prosody, syntax, and inflection, the insistence on the methodological side of archaeology, the ambition to convert the pseudo-science into a genuine one, can destroy its general value for the modern world. To catalog and classify all the vases, statues, statuettes, coins, gems, and other objects is to perform a real service; but to leave it at that is to sin against the light."—Rhys Carpenter in *THE HUMANISTIC VALUE OF ARCHAEOLOGY* (*Harvard Univ. Press*).

Science News Letter, October 21, 1933

HISTORY

Beginning of Character

● "THE EGYPTIANS were the discoverers of character. It is fundamentally important that our modern world should realize how recent is that discovery. Civilization is built up on character, and the foundations are therefore still so new that we need feel no discouragement if the building has not yet exhibited the stability we may yet hope to see it achieve."—James H. Breasted in *THE DAWN OF CONSCIENCE* (*Scribners*).

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