

outside of that realm, would disappear. For it would be recognized on all hands that very much is known about the causes of all development even though certain steps, notably that by which species become differentiated sexually from other species, are still very obscure as to causation. No sane person could then make the charge, now being made by persons who undoubtedly are sane, that biologists "know absolutely nothing at all about the cause of evolution." Nor would even a fundamentalist Bishop be likely to announce himself (as one has recently been reported to have done) as standing four square against evolution, if evolution and development were everywhere recognized as being one and the same thing.

And the gain to clear thinking in biology itself would also be great in that the idea, often as vehemently defended as it is vaguely held, would vanish, that certain supposed causes of evolution must necessarily exclude one another.

What real justification is there, to illustrate, for assuming that if natural selection is a true cause of evolution, the inheritance of acquired characters must be denied—or vice versa? Darwin's position on this was beyond question logically sound. For him there was no *a priori* exclusiveness as between the two. It was solely a matter of evidence—of objective evidence. And so in the nature of the case is it to-day and so it will remain. Does anybody really believe that should one or more of the strong indications recently brought to light of the heritability of somatic modification be fully proved, natural selection would thereby be disproved?

It will be a great day for science when she shall have gained such a mastery over her mental technique that while speculative thinking shall continue to supplement and extend common sense thinking, it shall no longer destroy it.

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MARINE PLEISTOCENE FOSSILS FROM NEW YORK CITY

RECENTLY a fossil bivalve was sent by Stanley N. Shaw, editor-in-chief of the *Federal Reserve Club Magazine*, of New York City, to the

geology department of Cornell University for the determination of its character and history.

The shell was uncovered on September 30, 1922, by the workmen in excavating for the foundation of the new Federal Reserve Bank which occupies the block between Nassau, Liberty, William Streets and Maiden Lane; the specimen excited the interest of the officials and consequently was sent to Cornell. Three other shells and a piece of wood were also discovered at the same locality and later sent. These fossils prove to be of Pleistocene age and belong to the following species:

Venus mercenaria Linnaeus cf. *antiqua* Verrill—right and left valve.

Alectrion (Ilyanassa) obsoleta Say—2 specimens.

Chamaecyparis (cypress, white cedar) or *Thuja* (arbor vitae).

The wood has in places a coating of blue clay as well as flakes of mica. The shells are discolored by a bluish clay.

The following is the section as sent with the specimens:

- 29.8 feet, high curb level.
- 10.7 feet, old cellar bottom.
- 0 feet, high water level.
- 22 feet, sand.
- 38.7 feet, hardpan.
- 55.5 feet, hardpan, sand, clay and boulders.
- 64.5 feet, hardpan, gravel and boulders.
- 67.8 feet, disintegrated rock.

Base of foundation of Federal Reserve Bank, bed rock—(core sample norite, possibly a phase of the Palisade trap). "This is undulating and varies from a depth as here noted to a depth of 117 feet below curb."

The shells were found 60 feet below the high water level, in the layer of hardpan, gravel and boulders.

The specimens of *Venus mercenaria* are thick, more rounded posteriorly than the recent shells of the same species and vary from the living form in that the concentric ribs are prominent, coarse, lamelliform ridges which extend over the entire surface of the shell, covering the middle region which in the recent shells is characteristically smooth. The characters are like those described by Verrill for forms from the Post-Pliocene of Sankoty Head, Nantucket Island, Massachusetts, to which he gave the varietal name *antiqua*. *Venus mercenaria*, with

its numerous variations and mutations, dates back to Miocene time and is abundant to-day along the Atlantic coast, ranging from Florida to Massachusetts, and locally on the southwest coast of Maine and southern shores of the Gulf of St. Lawrence and Bay of Chaleur, from low water to 8 fathoms. *Ilyanassa obsoleta* also ranges from Miocene to Recent. Both of these species have been reported from well drillings on Long Island, including east New York City. They are from Pleistocene sediments (Veatch, Merrill, etc.). *I. obsoleta* is to-day one of the common small species of the east coast and ranges from Nova Scotia to Tampa, west Florida, from littoral to 2 fathoms.

The specimens are interesting in that they indicate marine sedimentation within the limits of New York City in Pleistocene or Glacial time. A further and exact study of the sediments of the section at the locality where the shells were discovered might reveal at what stage of that time the marine deposition took place and if the sea occupied the region where the shells were found or if they were transported by flowing water from a near beach and dumped with the drift and boulders. The officials and workmen connected with the Federal Reserve Bank are to be commended for the collection and interest which they have shown, the result of which is the establishment of a new locality of Pleistocene marine sediments in the New York City area.

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EVOLUTION IN WEST VIRGINIA

By special invitation, Honorable William Jennings Bryan recently addressed the legislature of West Virginia while it was in session at Charleston. Following this address Mr. Bryan made a tour of the state and gave anti-evolution addresses in several of the larger cities.

A bill prohibiting the teaching of evolution in all state-supported schools had already been introduced into the legislature. Just before the adjournment of the regular session, in the latter part of April, an advocate of the measure attempted to have the bill brought before the House, but the motion was lost and the bill was never allowed to come to vote.

It is stated that the address of Mr. Bryan in Charleston made practically no impression upon the members of the legislature.

One of the bitterest and most active opponents of the teaching of evolution, a minister of Morgantown, has been called to a higher sphere of usefulness(?) in Cincinnati and it is hoped that the anti-evolution agitation in the state has been permanently disposed of.

A. M. REESE

THE REPORTED ERUPTION OF LASSEN PEAK

SEVERAL times within the early months of this year Lassen Peak has been reported by newspapers of that region as in volcanic eruption. To settle conflicting reports I requested George Olsen and Charley Yori, well-known mountaineers of California and Alaska, to climb snow-clad Lassen Peak and determine the record, if any, made by the fall of volcanic ashes in the winter snow. Their letter of May 2 states: "There has been no eruption, as the snow is clean, no visible ash line in it and the crater where the eruption is supposed to have been has clean snow several feet deep covering the entire bottom of it and all other places where an eruption might have occurred show no sign of an eruption."

J. S. DILLER
Geologist

UNITED STATES GEOLOGICAL SURVEY

QUOTATIONS

PROPOSED INTERNATIONAL ASSOCIATION OF BRAIN WORKERS

SOME three years ago M. Henri de Jouvenel, one of the French delegates to the League of Nations, succeeded in establishing in France a *Confédération des travailleurs intellectuels*. This was the first national association of brain workers and now has 150,000 members; similar associations have been formed in eight other countries. A meeting of representatives of these associations was held recently at the Sorbonne, the headquarters of the University of Paris, with the countenance of the French government and under the honorary presidency of M. Léon Bourgeois, one of the most universally respected of French statesmen. It was attended also by "observers" from nine other countries.