more-Carmichael-Olson Company for the construction of additional buildings. One unit of approximately the same size as the present Mechanical Parts Plant, completed last summer, will house certain prism and lens manufacture. A connecting unit two and three stories high will be utilized for the assembly of special contract work. A third unit will provide expansion for the mechanical parts operations. The new buildings will be of the same general type of construction as the unit completed last year, and will involve the latest developments in heating, lighting, plant layout, flexibility for expansion and changes, and working conditions and facilities contributing to the welfare of employees. Approximately 130,000 square feet of additional floor space will become available through this new construction. A million and a quarter dollars will be expended in carrying through the current program.

INFORMATION has been received from Switzerland stating that the Herbaria of the Muséum d'Histoire Naturelle, Paris, which contains collections of great interest to American plant taxonomists, are all in good condition. The herbaria, which after the outbreak of the war had been divided among three castles near Paris, are now being returned to the Muséum.

AT a Congregation of the University of Cambridge on August 3 an emergency statute was made to allow, during the emergency, a professor to be a tutor, assistant tutor, bursar or assistant bursar of a college, either for an unspecified or for a specified period, provided that any leave so given shall end with the period of emergency, and shall be subject to such deduction from the professor's professorial stipend as the General Board, with the concurrence of the Financial Board, may determine in the particular case.

DISCUSSION

THE NAME CLAIBORNE IN GEOLOGIC LITERATURE

IN a recent number of *The Journal of Paleontology*[1] the suggestion was made to abandon the name Claiborne for the famous "sands" of the Claiborne bluff, Alabama, "now that the Gosport [Claiborne] proves to be Moodys" [Jackson] p. 339. Before abandoning the name Claiborne for these famous "sands" and applying it to a lower, different, horizon and substituting the Mississippi name Moodys for Claiborne "sands" (and thus bring about needless confusion in our Tertiary literature) should not the above suggested correlation be proven beyond doubt, and if proved should there not be a careful consideration among Tertiary workers as to the most feasible nomenclatorial changes to be made?

The stratigraphic basis for this new departure would seem to be summed up on page 338 of the author's article, which reads:

> The Gosport [Claiborne] and Moodys [Moodys Branch marl] represent the deposits of a transgressing sea that first invaded the Claiborne area, bringing with it some representatives of the Lisbon fauna as well as several large, conspicuous species (*Venericardia alticostata, Crassatellites alta,* etc.) that have not been found in Mississippi. Later the transgression continued westward into Mississippi carrying a transition fauna, which, in turn, was succeeded by the typical Jackson fauna at the base of the formation at Moodys Branch.

With but slight emphasis on the word "later" in the above quotation, the sequence of events suggested is precisely that we had in mind in our note "Age flow and ebb of Eocene seas."[2] In both citations the Claiborne is admitted to have been deposited before the Moodys Branch Jackson. If so, how can "the Gosport [Claiborne] prove to be Moodys"?

From a paleontological standpoint (dealing now, however, only with the Mollusca) a few facts may be mentioned.

1. Miss Julia Gardner's article "Recent collections of Upper Eocene mollusca from Alabama and Mississippi," immediately following Cooke's in the *Journal of Paleontology* above cited, indicates that about 10 per cent. of Claiborne (Gosport) fossils are found in the later Eocene formations.

2. Our studies of the Turrids so far as now conducted seem to indicate a much smaller proportion of species in common.

3. Of Venericardia planicosta-like forms, Gardner and Bowles[3] find no representatives passing from Claiborne to Jackson beds though one ranges from Lower to Upper Claiborne.

4. In Bowles's article on Turritellas[4] we note no form of this genus in common from these two horizons.

5. In our studies of the Pelecypoda of the Claiborne and St. Maurice stages about 18 per cent. are found in common between these two stages.[5]

6. Mrs. Palmer's work on the Gastropoda[6] shows about 19 per cent. in common between the same horizons.

Hence, so far as mollusks are concerned there ap-

[1] C. Wythe Cooke, *Jour. Paleont.*, 13: 337–339, 1939.

[2] SCIENCE, 48: 646, 1919.

[3] Julia Gardner and Edgar Bowles, *U. S. Geol. Surv., Prof. Paper* No. 189F, chart 2, 1939.

[4] Edgar Bowles, *Jour. Paleont.*, 13: 267–336, 1939.

[5] G. D. Harris, *Bul. Am. Paleont.*, 6: 268, 1919.

[6] K. V. Palmer, *Bul. Am. Paleont.*, 7: 730, 1937.

pears to be about twice the percentage in common between the St. Maurice (Lower Claiborne) and Claiborne, as between the latter and the Jackson. Moreover, the marked individualistic character of the true Claiborne molluscan fauna apparently precludes its amalgamation with either the St. Maurice or Jackson beds, especially the latter.

Forty-odd years ago we observed *Mitra millingtoni* and *Aturia* in the impure limestones just above the "sand" at the Lower Claiborne bluff suggesting that here might be the position of the Moodys Branch marl though now generally classified as basal "Ocala." We hope to refer to this subject again in the near future. At any rate, let us not drastically modify our Eocene stratigraphic nomenclature until more evidence is presented requiring such modifications.

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THE MUSEUM AND SOCIAL ENLIGHTENMENT

Your readers surely approve of Dr. Goldstein's argument, published in Science (August 30, 1940), that museums should be potential forces for social enlightenment. Some of his proposals, however, are already realities.

When I was there last the Deutsches Museum, the masterpiece that the late Dr. Oskar von Miller created in Munich, had thirty-three motion-picture machines which explained factory processes. A very large proportion of the exhibits were of the dynamic variety for which Dr. Goldstein pleads; that is, the visitor could push buttons and pull levers, make the wheels go round and see for himself how sectioned locomotives, engines and other machinery worked. Von Miller's principles have been followed both here and abroad in technical museums. It may interest Dr. Goldstein to know that von Miller conceived the idea of the planetarium and installed the first one in his museum.

Yet it must be conceded that no museum in the world interprets its exhibits both technically and socially. Surely it is not enough to install a model of an elevator and watch it go up and down as a button is pushed. The elevator created the skyscraper and hence Rockefeller Center. When a single huge office building discharges 50,000 on the sidewalk at five o'clock a problem in transportation is created which the engineer must solve. That, too, is part of the elevator's social story. And so with the cotton gin, which revived a dying slavery in this country and was the occasion of our high tariff policy, and with the steam-engine of Watt, which gave us the slum.

Especially vulnerable to attack is the natural history museum—usually a storehouse of exhibits. It should begin with the solar system and show by motion pictures of the animated cartoon type how a great star wanders in our part of the heavens and by sheer gravitational attraction pulls out of the solitary sun long streams of gas which curl into spirals and eventually congeal into planets.

We are now prepared for geology and geophysics. So we pass into an adjacent hall and see how this cooking, heaving earth became what it is to-day—see with the aid of operative models that we may work ourselves how mountains, continents and seas were formed, learn something of the seismic forces that are still molding the earth, behold miniature volcanoes spouting imitation lava and ashes and burying Herculaneum and Pompei.

In the next division the curtain goes up on the drama of life. The first bit of protoplasm is born in a puddle on this congealed earth. Microscopes on every hand reveal primitive living forms. Or Dr. Roemmert's microvivarium, which made such a success at the Chicago and New York World's Fairs, could be used here with even greater dramatic effect.

We move on and learn what becomes of this protoplasm. The first backbone appears. Reptiles, birds, mammals follow. At last come the anthropoid apes. *Homo sapiens* is in sight. His origin is obscure. But he is seen emerging in such experimental forms as *Pithecanthropus erectus,* the Peking Man, the specimens found in Sussex, England, Rhodesia, South Africa. This evolution of life is shown by the diorams now so highly developed, stuffed animals, skeletons, single bones, but above all by motion pictures.

Having created man we pass into the anthropological division and see what he has made of himself—see the Cro-Magnons experimenting with art, the Swiss lake-dwellers building their houses on piles and learning to weave. Roman bathtubs, mummies, totem poles, click into their logical places. But the end is social man—man, a free agent, dominating his environment. From the birth of the solar system to man—what a story!

It may be argued that all we have done is to rearrange familiar exhibits and compel the visitor to follow a definite route, to present more diorams, more dynamic models, more motion pictures. True. But we are also more evidently progressing from star to man. Slimy puddles and extinct dinosaurs appear more obviously as preparations for the emergence of man. The totem poles and the mummies are clearly ripples in the current of biological and social evolution.

The most ambitious museum ever planned but never erected was that of Le Corbusier and Paul Otlet. In their vast pyramid there is not a staircase—only ramps and elevators. You begin your journey at the apex. There you see the first man with nothing but his hands and his brains. You spiral your way down and behold him acquiring new abilities, learning how to fashion tools, how to cultivate the soil, how to weave. Further