latter in Europe by about half a dozen and in America by twenty-five species; while Carabus is represented in Europe and Asia by the respectable number of 100, and in America by a short dozen species.

My favorite family of Poelaphidæ, unlike their relatives, the Staphilinidæ, seem not very apt to migrate on the lines of commerce, but extend over a space of 60° latitude north and south.

In the colder regions of the north the species of one genus inhabiting both continents are very similar, while the tropical and southern genera, with a comparatively small number of species, differ in form so much that they can hardly be retained under one name.

Their habits, which suffer an involuntary modification by transportation through atmospheric forces into localities of different nature, produced in the fittest to survive changes of the most grotesque forms, and by repeated dislocations confined them in circumscribed localities.

This holds good for the tropical forms of this family in the large continents; but there are examples of genera occurring in places far apart. Tmesiphorus, Tyrus, and Hamotus are of that nature. To the latter belong Upulona raffray and Cercocerus lecoute, which differ, according to M. Raffray, by the more elongated form of the last joint of the maxillary palpi in Cercocerus, and the former occurs in the Friendly Islands, and the latter, together with the rest of Hamotus, is found in the western regions and on the Pacific coast of America, north and south.

The streams of the Pacific Ocean are directed from west to east, and therefore would not allow a migration against the stream; consequently the original abode of those species must have been situated in the west of America, and their migration, considering the multiplication of forms in America, must date back to the remotest ages.

The Tenebrionidæ present a typical family of non-migrating beetles. The large majority of tenebrionide genera are wingless. They are slow in motion, and live on dead animal and vegetable matter. The generic forms of most of those in America are but distantly related to those of the eastern continent. The genera common to both continents are few, and the few immigrant species are winged, with one exception recently found — Blaps mortiraga — and such genera, which are at present assumed to be common to both lands (as Asida), owe their name to the now accepted basis of analytical marks.

The existence of these analogical forms can be explained only by the different geological and geographical conditions of the surface of the earth in remote ages. But there is always to be considered the axiom that similar conditions produce similar forms.

EMIL BRENDEL.

Cause of a National Trait.

IT is a matter of common observation that Hebrews, as a rule, are more than ordinarily devoted to their families, and their home-life is beautiful in many ways. As everything has a cause, the most plausible one in this regard appears to me to be the severe persecutions to which that race has been subjected for centuries, compelling clannishness and affording them their greatest happiness at home. Persistent influences acting through numberless generations would surely institute a racial peculiarity such as this.

S. V. CLEVENGER.

Chicago, Aug. 15.

Review of some Recent Publications of the U. S. National Museum.

FOR some time past the National Museum has been following the very desirable plan of issuing, in separate pamphlet form, the contributions of those authors who publish in the Proceedings or other reports of that institution. These pamphlets are uniformly contained in neat paper-covers, tasteful in color, and bear upon the outside page the title and author of the article and its number, from what standard publication of the Museum extracted, and, finally, the volume, pages, and plates (if any) of the latter. It would be well, indeed, if other institutions and societies always followed suit in these last two features, for if one thing be more annoying than another to a worker in science with a working library, it is to receive reprints of papers that bear nowhere upon them this very important information; especially when an author desires to quote from reprints that have been submitted to him. At this date the Museum has issued a number of pamphlets of the character to which the attention of the reader has just been drawn, and it is believed that brief remarks upon these may prove to be of interest.

In No. 898 Mrs. M. Burton Williamson gives "An Annotated List of the Shells of San Pedro Bay and Vicinity," in which two new species are described by W. H. Dall. This list is brought quite up to date, carefully describes a great many species, is systematically arranged, and is illustrated by 38 excellent figures on plates. It will, no doubt, prove of use and value to the conchologists of the Pacific coast and elsewhere. Dr. Edwin Linton, in No. 893, gives some very full and valuable "Notes on Avian Entozoa," illustrated by nearly 100 figures of structural details. Entozoa found in specimens of *Larus californicus*, *Fuligula vallisneria*, *Oedemia americana*, and *Pelecanus erythrorhynchus* are described, in addition to parasites found in other birds collected by Mr. P. L. Jouy at Guaymas, Mexico. "One new genus was met with among the parasites of the duck, *Oedemia americana*. This genus, which I have named *Epision*, is characterized by a singular modification of the anterior part of the body into an organ for absorption and adhesion." In a brief paper, entitled "A Maid of Wolpai," with one plate, Dr. R. W. Shufeldt gives an account of the customs and dress of the young women of that Pueblo (No. 889); and the same writer, in another paper (No. 902) entitled "The Evolution of House Building among the Navajo Indians," describes the gradual improvement observed by him in the building of their houses by those Indians in New Mexico, since their contact with the whites. The paper is accompanied by three plates illustrating the subject. Lieut. T. Dix Bolles of the navy comments briefly on "Chinese Relics in Alaska" (No. 899, one plate), and from his studies of them he is forced to believe that at least two centuries ago a Chinese junk must have been driven upon the Alaskan coast. A very useful paper is that by Mary J. Rathbun, giving a "Catalogue of the Crabs of the Family Pericerídæ in the U. S. National Museum" (No. 901), and it is illustrated by numerous figures of various species of that group Papers of this class are especially desirable, and at the time of its appearance there were to be found in the collections of the Museum 48 species of *Pericerídæ*, for which a valuable synonomy is given, with a "Key" to genera and species. Akin to this last is still another beautifully illustrated paper by Mr. James E. Benedict, on "Corystoid Crabs of the genera Telmessus and Erimacrus." Very little is known of these forms, and the writer's article is based on specimens collected in Alaska by Dall, and on the *Albatross* collections (No. 900). No less interesting are two admirable papers by Dr. Leonhard Stejneger, both of which are illustrated (Nos. 894, 904). The first gives a "Preliminary description of a new Genus and Species of Blind Cave Salamander from North America,"— a remarkable form from the Rock House Cave, Missouri. "A new genus and species of salamander may not be such a startling novelty even at this late date, but the interest is considerably heightened when we have to do with the first and only blind form among the true salamanders." It has been named by the author *Typhlotriton spelæus*. Dr. Stejneger's second paper is of considerable length, presenting, as it does, extensive "Notes on a Collection of Birds made by Harry V. Henson in the Island of Yeso, Japan." It contains many excellent embryological plates. Professor Carl H. Eigenmann, in No. 897, makes a contribution to the study of "The Fishes of San Diego," in which "especial attention has been paid to the spawning habits and seasons, the embryology, and migration of the fishes of Southern California." The paper is of great economic value, and lacks not in interest to the anatomist.

Finally, we have three very thorough entomological articles from the pen of Dr. John B. Smith (Nos. 890–892). They deal with a "Revision of the Genus Cucullia; Revision of the Dicopinæ; Revision of Xylomiges and Morrisonia" (plates II., III.). These contributions will be welcomed by the entomologist, fully

setting forth, as they do, characterizations of the several genera and species to which the author has given his attention.

R. W. SHUFELDT.

Takoma, D. C., Aug. 15.

The Color of the Blood in Man.

HAVING recently examined a large number of specimens of human blood from persons of different ages ranging from four to seventy-six years, some being those in robust health, others being tuberculous, I was struck with the great difference in the shade of color presented, some being of a very rich tint, others very pale. The richest color was in the blood of a girl twenty-six years of age, a graduate of Vassar College, who had the highest anthropometric measurement for respiratory capacity in a class of about 500 girls. Her health was excellent, and she consumed rather more flesh-food than is usual. The next highest tint was found in the blood of a woman about seventy years old, with a somewhat unusual chest measurement, having also excellent respiratory capacity and being in fine health. This woman, on the contrary, does not eat flesh at all. I expected in her case to find a more than ordinary number of white blood corpuscles; but there were far less than usual, it being difficult to find them, they were so few. The palest blood was from a chlorotic Irish servant-girl of twenty-five years, and in a tuberculous boy of four. There was not much perceptible difference in their cases. The girl had naturally good respiratory power, but she had lessened it by tight clothing and an almost constant in-door life for a long time. After spending a month at the seaside, I examined her blood again, and found the tint somewhat deeper than before. As we know, the color of the blood is caused by the hæmoglobin in the red blood corpuscles, and if this is greater when the respiratory capacity is greatest, may not the color of the blood be heightened by enlarging the chest and increasing the lung-power? From some observations I have made I believe it can.

M. L. HOLBROOK.

New York, Aug. 16.

Snake Eats Snake.

WHILE walking over a dry mesa, yesterday, I noticed a small snake slowly crawling to the shelter of a mesquit bush. On capturing it, I found it to be of a very dark olive-green color, in large, square pattern, the lines between the plaids being of lighter green; underneath, white, with very dark-green blotches. Its head was very dark green, and rather small; it had small fangs. The length of the snake was nineteen inches. Noticing that the body seemed much distended, I opened it, and found, nicely packed away inside, the body of an ordinary, brown, striped "grass snake," as we call them here, twenty-two inches long. This green snake may be a new species of snake-eating serpent. The grass snake is very swift, and I am puzzled to know how the green snake caught it; it was swallowed head-first.

C. W. KEMPTON.

Oro Blanco, Arizona, Aug. 8.

Cleistogamy in the Pansy.

MR. DARWIN, in "Forms of Flowers," notes that, though cleistogamy is the rule in the genus *Viola*, the pansy, *Viola tricolor*, has not been known to exhibit it, though it does sometimes produce very small and closed self-fertilizing flowers, which would critically be termed cleistogamic if some portions of the floral organs were to abort. In our country this condition may more readily occur than in the Old World. In many localities the pansy has become partially wild and cleistogamy may be looked for. Mr. Chalkley Palmer has sent me some specimens in fruit, found wild in some place in New Jersey, which are certainly in one or the other condition noted by Mr. Darwin. They appear to be truly cleistogamic, but were too far advanced to determine with accuracy.

THOMAS MEEHAN.

Germantown, Pa.

BOOK-REVIEWS.

Annual Report of the Geological Survey of Arkansas for 1890. Vol. III. *Whetstones and the Novaculites of Arkansas.* By L. S. GRISWOLD. Little Rock, Arkansas.

THE history of the rise and progress of geology in the United States remains to be written. It dates back to early in the century; for in 1807 McClure published a paper containing geological observations. Mitchell, Eaton, Dewey, Silliman, and hosts of others followed one another in rapid succession. Nor were the observations of private individuals all that appeared in the early decades, for in 1823 Olmsted published a report on the geology of North Carolina, as one result of a regularly organized State survey, while Hitchcock in 1831 reported upon the geology of Massachusetts. Between that date and 1840 State surveys had been organized and reports had been published in Maine, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, Georgia, Tennessee, Kentucky, Ohio, Indiana, and Michigan. The general government, too, had sent expeditions to the north-west, Schoolcraft reporting upon the Michigan region as early as 1820. It is true that many of the State surveys ceased after the issuance of a few documents, but their existence even for a brief period was evidence of the belief in their value. Some of the States organized second surveys at a later date and published numerous volumes, among which New Jersey, Pennsylvania, Ohio, and Kentucky are especially to be noted. The survey of New York has been continued from 1837 until the present time.

In those olden times the State survey reports were general; observations were made over an extended area; profuse details were given of township or county geology; but no one subject was treated in an exhaustive manner. The result was that, when ten or a dozen or more volumes had been published, it still remained to collate and epitomize the information. For the States of New York, Pennsylvania,[1] Kentucky, Ohio, Illinois and others this has never been done, and the numerous volumes of these surveys are masses of details with full and comprehensive accounts of scarcely a single subject. Dr. Branner, as the State Geologist of Arkansas, has seen fit to change this ancient order of things, and as a result in his annual reports we have volumes describing the Mesozoic geology, the gold and silver fields, and the coal of the State, as well as exhaustive volumes on Manganese and the Novaculites. The first geological survey of Arkansas published two reports, in 1859 and 1860. The beginning of the war put a stop to the work, however, and it was not until 1888 that any further work in the State was published. The report for that year, and those for 1889 and 1890, of which the volume under review is the third, contain much information valuable alike to the State and to the world at large.

Whetting, or sharpening, is one of the ancient arts. That it was practised by early civilized man is evidenced by the existence in the Sanscrit of the word *ça*, meaning to sharpen or whet. From this comes the Latin *cos*, a whetstone, hone or flint-stone, and hence *cotaria*, a whetstone quarry. *Coticula*, meaning a small touch-stone, is also a derivative, and from this comes the French *coticule*, meaning a whetstone of a fine quality. *Novaculite* comes from *novacula*, a sharp knife or razor, and this in turn is derived from the Latin *novare*, to renew or to make fresh.

Many writers from Pliny down discuss whetstones or hones for sharpening tools. Linnæus used the word *novacula* in his time, and it was seemingly anglicized by Richard Kirwan into *novaculite* in 1784. Mr. Griswold believes, although all mineralogists do not agree with him,[2] that it is practicable "to revive the word as a scientific term, in its original sense, to denote a fine-grained, gritty, homogeneous, and highly siliceous rock, translucent on thin edges, and having a conchoidal or sub-conchoidal fracture. If this definition is strictly adhered to, no confusion will arise from the use of the word in commerce" (p. 18).

The knowledge of whetstones in America dates from 1818, when they were mentioned by Bringier as occurring in Arkansas.

[1] Professor J. L. Lesley is now engaged on this work, and Vol. I. of his final report has appeared.

[2] For example, G. P. Merrill in Annual Report U. S. Nat. Mus. for 1890, 1892. p. 525.