## 

AND

## FRIEND OF KNOWLEDGE.

## IN EIGHT NTMBERS.

Containimg about 160 original articles and tracts on Natural and Historical Sciences, the Description of about 150 New Plants, and 100 New Animals or Fossils. Many Vocabularies of Languages, Historical and Geological Facts, \&c. \&c. \&c.

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> Knowledge is the mental food of man.

## FIGURES.

Melissa or Balm, Mammoth Cave, Franklinia, Fossil Teeth,

page ${ }^{14} \mid$ Tubular shell, $\quad$ page 127 277 New Fossil Shells, 148 79 American and Lybian Glyphs $10 g$ or Primitive Alphabets, 38

PHILADELPHIA:
1832-1833.
(TWO DOLLARS.)
and 77 per cent with the Taino of Hayti in the 16th century, both spoken by Aruac nations.

This fine nation seems to have overspread South America to the very end, altho' it may be one of the last come from the East, since nearest to the Atlantie shores, and with striking philological analogies with the ancient nations of Europe and North Africa.

The Aruacs were spread over all the West Indies, except where driven off by their foes the Caribs, they were mingled with them in Guyana, Columbia and Brazil, under many names; even the Taos or Chiquitos of Chaco appears to have been a branch, since they have 80 per cent analogy in languages with the Taino.

The famous Muhizcas so early civilized were also a kin to them, since they have 62 per cent analogy with the Tao, 67 per cent with the Patagon.

The other nations of South America with 50 per cent and upwards analogy with the Pa tagons are,

Darien 68 per cent.
Mbaya 64 per cent.
Lule and Vilela 50.
While in North America we find the Mayan, Chontal and Poyais each 60 per cent. Tarasca 50 \&c.

Thus becomes evident how absurd and erroneous is the opiaion that American languages have no mutual affinities, and that the Patagons are a peculiar species of gigantic теп.
C. S. R. deviations of shapes, forms and

12s. N. G. Cauloma. Raf. This is a fine N. G. of radiate plants, discovered in 1818 in the barrens of West Kentucky, deemed then doubtful, seen again in 1823 and ascertained to be a peculiar $G$. near to Rudbeckia and Barcheta: the name means edged stem.

Cauloma. Perianthe in double series 12 parted, Phoranthe convex, with biform chafis, external flat membranaceous, internal linear oarinate, amplectens, thick above. Rays 12 bidentate. Seeds oblong compressed naked, no teeth.
C. tomentosa Raf. Stem virgate simple, angular winged, wings tomentose; leaves sessile remote decurrent, lanceolate rhomboidal, tomentose, end serrate acuminate: flowers terminal glomerate subsessile tomentoes, perianthe lanceolate acute, rays yellow lanceolate.

A singular plant 1 or 2 feet high, entirely wooly, blossoming in June and July.
124. Principles of the Philosophy of new Genera and new species of Plants and Animals.
Extraet of a letter to Dr. J. Torrey of New Fork dated 1st Dec. 1832.... I shall soon come out with my avowed principles about G. and Sp. partly announced 1814 in my principles of Somiology, and which my experience and researches ever since have confirmed. The truth is that Species and perhaps Genera also, are forming in organized beings by gradual
organs, taking place in the 8000 to 1200 or 1500 primitive lapse of time. There is a ten- Sp . with genealogical tables of dency to deviations and muta. the gradual deviations having tions through plants and ani-formed our actual Sp. If I canmals by gradual steps at remote irregular periods. This is a part of the gicat universal law of perpetual mutability in every thing.

Thus it is necelless to dispute and differ about new G. Sp. and varietics. Every variety is a deviation which becomes a Sp. as soon as it is permanent by reproduction. Deviations in essential organs may thus gradually become N. G. Yet every deviation in form ought to have a peculiar name, it is better to have only a generic and specific name for it than 4 when deemed a varicty. It is not impossible to ascertain the primitive Sp . that have produced all the actual; many means exist to ascertain it: history, locality, abundance, \&c. This view of the subject will settle botany and zoology in a new way and greatly simplify those sciences. The races, breeds or varieties of men, monkeys, dogs, roses, apples, wheat.... and almost every other genus, may be reduced to one ora few primitive $\mathbf{S p}$. yet admit of several actual Sp. names may and will multiply as they do in geography and history by time and changes, but they will be reducible to a better classification by a kind of genealogical order or tables.

My last work on Botany if I live and after publishing all my N. Sp. will be on this, and the reduction of our Flora from

