

eastern Mexico; and two more are known from the Rio Panuco, one of these extending into Southern Vera Cruz. The southernmost species is *Amiurus meridionalis* from the Rio Usumacinta. The four remaining species occur respectively in Arizona and Sonora, Chihuahua and Durango, the Rio Lerma, and the Rio Balsas.

The family LORICARIIDÆ, with over 200 species, ranges from Panama to Montevideo, and has evidently evolved in South America from the Siluridæ.

### *The Nearctic Region.*

For fresh-water fishes the volcanic chain of mountains which stretches across Mexico from Colima nearly to Vera Cruz may be taken as the boundary between the Nearctic and Neotropical Regions. This range has proved an insuperable obstacle to the northward migration of the neotropical fishes, none of which have surmounted it to reach the Mexican plateau; in the narrow lowland strip near the west coast of Mexico one neotropical type (*Cichlosoma beani*) has extended northwards to the Rio Presidio in Sinaloa, whilst in the plains of Northern Vera Cruz and Tamaulipas on the east some neotropical fishes are found, viz. five Cichlids\* and a Characinid (*Tetragonopterus mexicanus*), which last has spread from the Rio Grande on to the plateau north of the Lerma System. These only counterbalance the nearctic types which occur south of the Nearctic Region, viz. *Goodea whitii*, *Amiurus balsanus*, *Notropis boucardi*, and *N. aztecus* in the Rio Balsas, *Amiurus meridionalis* and *Ictiobus meridionalis* in the Rio Usumacinta, the latter also in the Rio Papaloapam, and *Lepidosteus tropicus*, ranging from Guatemala to Panama.

The Nearctic and Neotropical Regions are quite distinct, and show no affinity whatever. The former has much in common with the Palæarctic Region, whilst the latter shows relationship only to the Ethiopian. In addition to partly marine groups, such as the Salmonidæ and Gastroteidæ, there are several families of true fresh-water fishes common to the Palæarctic and Nearctic Regions (*e. g.*, Esocidæ, Cyprinidæ, Percidæ, &c.). The latter is characterized by some endemic families (Hiodontidæ, Amblyopsidæ, Percopsidæ, and Aphredoderidæ), by the numerous dwarfed Percidæ (*Etheostoma*, &c.) and the great development of the Cyprinodontinæ (partly marine), and by three groups of fishes which are almost peculiar to this region, viz. Catostominæ, Siluridæ of the genera *Amiurus*, *Noturus*, &c., and Centrarchidæ. The first two are also found in

\* *Cichlosoma labridens*, *C. bartoni*, *C. steindachneri*, *Herichthys cyanoguttatus*, and *H. pavonaceus*.