

phenomenon is observable at the mouths of the Danube, and of the river Syra, in Norway.

Notwithstanding the enormous impulse given to these great masses of water, they cannot always flow freely into the ocean ; the ascending tide crushes them back, and a gigantic struggle then takes place between the fresh-water floods pouring down from the inland plains and mountains, and the salt waves which the flow of the sea brings up. At the mouth of the Amazons river the tide penetrates into the interior for upwards of two hundred leagues, occupying several days in the journey. At the epochs of the strongest tides—that is, at new and full moon—the sea attains in two minutes an elevation which usually it does not attain in less than six hours. The spectator then beholds a wave of 13 to 16 feet in height advancing with incredible swiftness ; it is speedily followed by a second ; then by a third and a fourth, which spread themselves over the entire surface of the river. The collision of these masses of fresh and salt water makes the neighbouring islands tremble ; the ships hurriedly make all sail from the scene of the terrible conflict, whose din may be heard at a distance of two leagues.

The waters of the Orellana, and those of the ocean, says Malte-Brun, precipitate themselves into the battle like two armies ; with their foaming waves the shores are inundated ; rocks, dragged along like so many tiny pebbles, dash against each other on the back of the billow which bears them ; you might say that the genius of the river and the god of the ocean contended for the empire of the waves.

This description is somewhat too poetical ; but the phenomenon of the *prororoca* is one of the most imposing scenes in nature.

In the Orinoco, the influence of the tide, in April, is felt for more than 75 leagues from the river's mouth ; its elevation at the embouchure is 40 inches ; it decreases gradually towards the interior.

In Asia, in the Indus and in the Hooghly, one of the arms of the Ganges, the waves ascend for upwards of 80 miles, at the rate of 18 miles per hour.

In the European rivers, this reflux of the ocean at their embou-