

soaks down into it, it carries down with it a great part of the heat, which by that means descends still deeper.

The mass of the earth, to the depth perhaps of thirty feet, being thus heated to a certain degree, continues to retain its heat for some time. Thus the first snows that fall in the beginning of winter, seldom lie long on the surface, but are soon melted, and soon absorbed. After which, the winds that blow over the country on which the snow had fallen, are not rendered so cold as they would have been by those snows, if they had remained, and thus the approach of the severity of winter is retarded, and the extreme degree of its cold is not always at the time we might expect it. viz. when the sun is at its greatest distance and the day shortest, but some time after that period, according to the English proverb, which says, 'as the day lengthens, the cold strengthens.' The causes of refrigeration continuing to operate, while the sun returns too slowly, and his force continues too weak to contract them.

During several of the summer months of the year 1783, when the effect of the sun's rays to heat the earth in these northern regions should have been greatest, there existed a constant fog over all Europe, and great part of North America. This fog was of a permanent nature; it was dry, and the rays of the sun seemed to have little effect towards dissipating it, as they easily do a moist fog, arising from water. They were indeed rendered so faint in passing through it, that when collected in the focus of a burning-glass, they would scarce kindle brown paper, of course their sum-

mer effect in heating the earth was exceedingly diminished.

Hence the surface was early frozen; hence the first snows remained on it unmelted, and received continual additions. Hence the air was more chilled, and the winds more severely cold.

Hence perhaps the winter of 1783-4, was more severe than any that had happened for many years.

The cause of this universal fog is not yet ascertained; whether it was adventitious to this earth, and merely a smoke, proceeding from the consumption by fire of some of those burning balls or globes which we happen to meet with in our rapid course round the sun, and which are sometimes seen to kindle and be destroyed in passing our atmosphere, and whose smoke might be attracted and retained by our earth: or whether it was the vast quantity of smoke, long continuing to issue during the summer, from Hecla in Iceland, and that other volcano, which smoke might be spread by various winds over the northern part of the world, is yet uncertain.

It seems, however, worth the enquiry, whether other hard winters, recorded in history, were preceded by similar permanent and widely extended summer fogs. Because if found to be so, men might from such fogs conjecture the probability of a succeeding hard winter, and of the damage to be expected by the breaking up of frozen rivers, in the spring, and take such measures as are possible and practicable, to secure themselves and effects from the mischiefs which attended the last.

ANECDOTES of the unparalleled VICISSITUDES in the LIFE and REIGN of JOHN ERNEST BIRON, the last DUKE of COURLAND.

[From Cox's Travels.]

JOHN ERNEST BIRON was descended from a family of mean extraction. His grandfather, whose name was Biren, or Bieren, was head groom to James the Third, Duke of Courland, and obtained from his master the present of a small estate in land. His son accompanied Prince Alexander, youngest son of the Duke of Courland, in a campaign into Hungary against the Turks, in quality of groom of his horse, and with the rank of lieutenant. Prince Alexander being killed before Buda, in 1686, Biron returned into Courland, and was appointed master-huntsman to the Duke.

Ernest John, his second son, was born in 1687, received the early part of his education in Courland, and was sent to the University of Königsbergh in Prussia, where he continued until some youthful imprudencies compelled him to retire.

In 1714, he made his appearance at St. Petersburg, and solicited the place of page to the princess Charlotte, wife of the Tsarévitch Alexey; but being contemptuously rejected as a person of mean extraction, retired to Mittau, and chanced to ingratiate himself with Count Bestuchef, master of the household of Anne, widow of Frédéric William Duke of Courland, who resided