## NATURAL IHSTORY.

## TUB GOAT.

This animal is found in every part of the world-masily domesticatel,-and too well known to need a description. It is often mentioned in the Bible. Dr.' lRussell and other travellers inform us, that in Syria they have two kinds of goats; one that differs little from the common sort in Britain; the other remarkable for the length of its ears, which are sometimes upwarils of a foot lopg, and broad in proportion. To this description of the guat it is, as Mr. Hammer reasonably supposes, that the prophet A mos refers, in expressing the smallness of that part of Israel that eseaped from destruction, and were seated in foreign countries: 'As the shepheral taketh out of the mouth of the lion, two legs, or a picce of an cerr, so shall the children of Isracl be taken out that divell in Samaria, and in Damasens,' ch. iii. 10.

The goat was one of the clean animals which the Israclites were permitted to eat, and to offer on the altar, (Exodus xij. $\dot{y}$, \&c.;) and the flesh of the kill is frequemtly mentioned in terms which show that it was esteemed as a great delicacy, Gen. xxaviii. 10, 17 ; Jud. xvi. Solomon promises as a - reward-to the diligent husbondman, that he shall liave goat's milk enough for his food, for the fool of his household, and for the maintenance of his maidens, (Provi. xxvii. 27;) which to us may appear somewhat strange; but Russellassures us, that in Aleppo, these animals are chiefly kept for their milk, of which they yield no inconsiderable quantity; that it is sweet and well-tasted, and frequently used for the making of cheese. This furnishes one amongat many instances of the importane: of historical and local information to a right understanding of the sacred writings.

The following story, said to be true, shows that the goat possesses instinct, which in case of necessity, leads it to very ugenious contrivances.
"Round the crag of a high rock in Wales overhanging the sea, are the remains of an ancient castle, once the seat of grandeur hut now serving only to beighten the prospect, and many perches above its base rums a projecting ledge, perhaps a foot wide.

A couple of goats grazing about the summit by some means got upon the ledge and one of them advancing till it arrived at an angle, was enabled to turn; but in its way back met its companion, which produced a most perplexing dilemma, for it was impossible to pass each other. Some persons having wandered near the ruins in order tr gather some wild strawberries, which grew
in the neighboring woods arrived at this critical monent ant were witnesses of their dis: tress without being able to assist them. The poor animals were sensible of their unfortunate condition, and uttered the most doleful eries. Alter anxiously viewing them for some minutes, they ran to some cottages at a little distance to see if it was possible to discover any means of extricating them.A!en, women and children', led by curiosity, followed them to the spot; but they could ouly sympathize with the poor animals without givmg them any relici lest they should be precipitated on the rocks beneath. Many phans were proposed, but all were ineffectual. After a considerable time, when hope had almost given place to despair, one of the goats was observed to kneel down with great caution and couch as close as it conld lie; which was no sooner done, than the other with great dexterity, walked over him and they both returned the way they came in perfect safety."

How different from this was the conduct of the two men whose story is related by Capt. Riley. There is in Africa a pass cut in the side of analmost perpendicular mountain, barely wide enougls for the passage of a single man or animal. To prevent trouble from persons meeting in thisdangerous road, places were built to at each end from which the traveller could see the whole length. One night a Moor and a Jew, who had neglected the precaution of looking out before they entered the pass, botis ridiug on mules, met in the narrowest part. As the mules could not pass each other, their riders prepared to fight for the passage, by sliding over the heads of their beasts. The Moor had a sharp sword, with which he soon cut in preces the club, which was the only weapon of the Jew. The latter, finding death inevitable, clesped his antagonist round the waist, and sprung with him down the precipice, by which both were dashed to pieces. The place has ever since been called the Jev's leap.

One of the animals and both of the men might have been saved, had they pussessed something of the disposition of the goats.

## COMAON THENGS.

## No. I.-EIEAT.

Heat is more common, and moro universally diffused, than suy other substance connected with our earth. Every particle of air, water, earth, metals, every tree and leaf, every quadruped, fish or insect, contains more or less heat. And various bodies feel cold, not because they have no heat, but
therefore take it from them. Most bodies contain heat stored up within them, which is not perceptible to our senses, and may frequently be lrought out and rendered sensible. Water which is even cold to the hand, when mixed with three times its quantity of sulphric acid, is rendered more than boiling hot. The heat is thrown out of the water. because it becomes more solid than before, and cannot retain all the heat it had in store. If water be mixed with lime, and cause it to slack, a portion of it becomes as solid as the lime itself, and of course can retain but a smal. quantity of the heat it had when lis quid, and consequently throws off, or renders sensible an intense heat, and sometimes sets on fire ships or other veisels which contain it.

A piece of iron, which does not feel hot to the hand, may be made red hot, by giving it upon an auvil, a fev quick and smart blows, which press out the insensible Leat a nd render it sensible.

The air contained in a fire syringe, by at sudden compression, may be made to throw off heat enough to set fire to tinder, or a piece of cotton prepared for the purpose.

The friction of machinery, and of the limbs of trees, sometimes brings out so much insensible or latent heat, and renders it sens sible, as to throw a manufactory or forest into a conflagration.

Although many bodies are not hot, but intensely cold, when tested by our senses, they may still be rendered more cold, or made to give up heat, which is proof that they contain it. And it is supposed that every particle of matter from the highest point in the atmosphere, to the centre of tine carth, and even every atom of matter in other worlds and other systems, contains a portion of heat, to whatever degree of cold it may be reduced.

Heat is not only common and almost universal in its existence, but is scarcely less so in its application. Being dèprived, durs ing the winter, of a portion of the beat which the sun sends to us in rich abundance during the summer, chills our earth and locks it up in fros ' ; and but for a seasonably returning spring would cedse to afford sus* tenance either to the animal or vegetable creation. If he shonld withliold, eqen but a portion of his heat from our cartio for a single year, it would present one rast and dismal gloom, without a men, an onimal or plant living upon its surface.

## EVAPORATION.

Among the most extensive and important operations carried on by heat, is ovapopas tion. By this process, the water furnished to our eaith, is constantly performing the

