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THE

PHILOSOPHY

OF

ZOOLOGY;

OR

A GENERAL VIEW OF THE

STRUCTURE, FUNCTIONS, AND CLASSIFICATION OF ANIMALS.

By JOHN FLEMING, D. D.

MINISTER OF FLISK, FIFESHIRE,

FELLOW OF THE ROYAL SOCIETY OF EDINBURGH, OF THE WERNERIAN NATURAL HISTORY SOCIETY, &c.

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air was 66°. Hence he considers it as the most lethargic of animals.

The marmot (*Arctomys marmota*) possesses a summer temperature of 101° or 102°, which is gradually reduced in the torpid season to 43°, and even lower.

Bats have a temperature in summer nearly equal to that of marmots. They are soon affected by the changes of the atmosphere, and they cease to respire in a medium of 43°. In the month of July, the thermometer standing at 80°, the internal temperature of a bat was 101°, which is just the degree of heat in a group of them collected together in summer, and may therefore be considered as the natural standard. Mr CORNISH applied a thermometer to a torpid bat, and found that it indicated 36°. When awakened so much that it could fly a little, he again applied the thermometer, and it indicated 38°. SPALLANZANI found a bat, after being exposed during an hour to a temperature of 43°, to indicate 47°, the bulb of the thermometer being placed in the chest; when exposed to a temperature below the freezing point, the heat of the animal became the same as the surrounding medium, yet it always remained internally higher than the low temperature produced artificially, though the skin did not indicate any difference.

The wood-mouse (*Mus sylvaticus*) became torpid, according to SPALLANZANI, when the thermometer in its cage stood at 43°. The temperature of the belly externally was 45°, but its internal temperature was not much diminished, even by a degree of cold sufficient to induce torpidity.

In these experiments we observe, that the temperature of hybernating quadrupeds is greatly reduced below the summer standard, or the ordinary temperature of the animal in health and activity. Still, however, they continue to maintain a superiority in point of temperature above