

not sense to draw it in lengthways: White (Letter 6) describes some martins which year after year built their nests on an exposed wall, and year after year they were washed down. The *Furnarius cunicularius* in S. America makes a deep burrow in mud-banks for its nest; and I saw ("Journal of Researches," p. 216) these little birds vainly burrowing numerous holes through mud-walls, over which they were constantly flitting, without thus perceiving that the walls were not nearly thick enough for their nests.

Many variations cannot in any way be accounted for: the *Totanus macularius* (Peabody, "Boston Journ. Nat. Hist.," vol. iii, p. 219) lays her eggs sometimes on the bare ground, sometimes in nests slightly made of grass. Mr. Blackwall has recorded the curious case of a yellow Bunting (*Emberiza citrinella*) given in "Yarrell's British Birds," which laid its eggs and hatched them on the bare ground: this bird generally builds on or very close to the ground, but a case is recorded of its having built at a height of seven feet. A nest of a Chaffinch (*Fringilla caelebs*; "Annals and Mag. of Nat. History," vol. viii, 1842, p. 281) has been described, which was bound by a piece of whipcord passing once round a branch of a pine tree, and then firmly interwoven with the materials of the nest: the nest of the chaffinch can almost be recognized by the elegant manner with which it is coated with lichen; but Mr. Hewitson ("British Oology," p. 7) has described one in which bits of paper were used for lichen. The Thrush (*T. musicus*) builds in bushes, but sometimes, when bushes abound, in holes of walls or under sheds; and two cases are known of its having built actually on the ground in long grass and under turnip-leaves (W. Thompson, "Nat. Hist. of Ireland," vol. i, p. 136: Couch, "Illustrations of Instinct," p. 219). The Rev. W. D. Fox informs me that an "eccentric pair of blackbirds" (*T. merula*) for three consecutive years built in ivy against a wall, and always lined their nest with black horse-hair, though there was nothing to tempt them to use this material: the eggs also were not spotted. The same excellent observer has described (in "Hewitson's British Oology") the nests of two Redstarts, of which one alone was lined with a profusion of white feathers. The Golden-crested Wren (Mr. Sheppard in "Linn. Trans.," vol. xv, p. 14) usually builds an open nest attached to the under side of a fir-branch, but sometimes on the branch, and Mr. Sheppard has seen one "pendulous with a hole on one side." Of the wonderful nest of the Indian Weaver-bird (*Ploceus Philippensis*, "Proc. Zool. Soc.," July 27, 1852), about one or two in every fifty have an upper chamber, in which the males nest, grooved by the widening of the stem of the nest with a pent-house added to it. I will conclude by adding two general remarks on this head by two good observers (Sheppard in "Linn. Trans.," vol. xv, p. 14, and Blackwall quoted by Yarrell, "British Birds," vol. i, p. 444). "There are few birds which do not occasionally vary from the general form in building their nests." "It is evident," says Mr. Blackwall, "that birds of the same species possess the constructive powers in very different degrees of perfection, for the nests of some individuals are finished in a manner greatly superior to those of others."

Some of the cases above given, such as the *Totanus* either making a nest or building on the bare ground, or that of the Water-ouzel making or not making a dome to its nest, ought, perhaps, to be called a double instinct rather than a variation. But the most curious case of a double instinct which I have met with, is that of the *Sylvia cristicola* given by Dr. P. Savi ("Ann. des Sc. Nat.," tome ii, p. 126). This bird in Pisa annually makes two nests; the autumnal nest is formed by leaves being sewn together with spiders' webs and the down of plants, and is placed in marshes; the vernal nest is placed in tufts of grass in corn-fields, and the leaves are not sewn together; but the

ange in the
intelligence
(*is*), which
surrounding
inct. Yet
ave known
the orifice
Neither
, p. 429)
situations.
surface in a
height—a
te's "Sel-
-burrows.
(*oropus*) is
a one pro-
says that
near the
the water
he follow-
f the nest
he drip of
tly added
the wall,
wly added
ordinary
rway they
in trees.
ooseberry
anner with
labour to
ward had
ed, a pair
lection of
ys he has
he ground
ther "on
rly being
have been
pie; but,
could not
as found

ten come
ckdaw has
and had

311. For
in *Cyclop.*
Hist. of
Instinct,