ar.! boiled with skimmed milk into a thin paste, and after cooling is mixed with genuine cream in various proportions. The fraud may be detected by adding to the cream a solution of iodine in alcohol, or by adding a little nitric acid to the milk, and then a few drops of a solution of iodide of potassium. Either of these tests communicates a blue colour to cream which contains arrow-root, rice-powder, flour, or any other substance of which starch is a constituent.

Mushrooms.—A great number of *fungi* of a poisonous nature, bear a near resemblance to the mild eatable mushroom, so that even the best judges of them are liable to occasional deception. The following description of the true mushroom may be useful to those who intend to gather or to purchase this vegetable. The *gills* or under part of the cap are loose, of a *pinky-red*, changing to a liver-colour; situated close to the stem, but not united to it; very thick set, irregularly disposed, some forked next the stem, some next the edge of the cap, and some at both ends, in which case the intermediate smaller gills are generally excluded. The *cap* or pileus is externally white, changing to brown when old, and becoming scurfy; it is regularly convex, fleshy, flatter when old, from two to four inches, but sometimes even nine inches in diameter; it liquifies as it decays; the flesh is white. The *stem* is solid, white, cylindrical, from two to three inches high, half an inch in diameter. The *curtain* or membrane which extends from the stem to the edge of the cap, is white and delicate. When the mushroom first makes its appearance, it is smooth and almost globular, and in this state it is called a button. This species is esteemed the best and most savoury, and is much in request for the table. It is eaten fresh, either stewed or broiled, or preserved as a pickle, or in powder: it also furnishes the sauce called ketchup. The field plants are better for eating than those raised in artificial beds, their flesh being more tender; but the cultivated mushrooms are better looking, may be more easily collected in the proper state for eating, and are firmer and better for pickling. The wild mushrooms are found in parks and other pastures where the turf has not been ploughed up for many years. The best time for gathering them is in August and September.

Those who are accustomed to mushrooms can distinguish the true from the false *by the smell*. The following test will be found useful to other persons: Sprinkle salt on the spongy part or gills of the mushrooms to be tried. If they turn yellow, they are poisonous; if they turn black, they are good. Allow the salt to act a little time before you decide as to the colour.

Characters of False Mushrooms or Poisonous Fungi.—They have a warty cap, or else fragments of membrane adhering to the upper surface; they are heavy, they emerge from a *vulva* or bag; they grow in woods and shady places, or in tufts or clusters on the trunks or stumps of trees; they have an astringent styptic taste and a pungent and often nauseous odour; they become blue after being cut; they are moist on the surface; they possess an orange or rose-red colour, they turn yellow when salted. Mushrooms which possess any of these properties, are to be shunned as dangerous.

May Dew.—Most people are familiar with the appearance of the pearly dewdrops, as they hang upon the blades of grass or the leaves of trees, or stud like gems the prickly points of the brier or thorn, in the cheering light of the summer sunrise; yet the means by which the moisture becomes thus deposited, while the surrounding atmosphere is clear and dry, (as far, at least, as the senses can judge,) is in general passed over without notice.

Although in dry summer weather the air may *appear* entirely devoid of moisture, it is never *actually* so, as may be proved by the simple experiment of placing a known weight of any substance having an affinity for water in the open air for some time, and noting its increase of weight. For this purpose, various substances may be used, and among others, carefully dried earth, 1,000 grains of which, of a clayey texture, was found by Schulber, during a night of twelve hours, to have gained twenty-five grains: and the experiments of Sir H. Davy give similar results. This capacity of the air for retaining moisture seems to depend upon two conditions—1st, its weight, or density, as indicated by the thermometer—the greater the density, or heat, of the air, the more moisture it will retain. A person breathing in an atmosphere of 98° to 100° Fah., will observe nothing but air issuing from the mouth and nostrils; but let a colder medium, or anything presenting a surface of lower temperature be introduced, and vapour is immediately visible, which is deposited in the form of dew; as, for instance, when one breathes against a pane of glass in a frosty day. Here, then, is the simple illustration of the falling of the dew; the air holding vapour in invisible suspension, coming in contact with substances colder than itself, the vapour is condensed, and adheres to the condensing body in the form of water.

It may here be asked, why substances of a solid description have a tendency to become colder than the air by which they are surrounded? and why some substances have this tendency more than others? For an explanation of this, we must refer to one of the laws which regulate the distribution of heat, viz.: radiation. All bodies, even the coldest, radiate, or throw out heat, in straight lines, and are radiated upon by all other bodies in their presence, and not in contact. When a substance is being cooled, it is so in consequence of the heat which it gives out being greater than that which surrounding substances are able to return to it, and *vice versa* when it is being heated. But, when a body is so situated as to permit of radiation going freely on without any compensating return of heat, it is evident that its temperature must be materially lowered. The surface of the earth heat radiates to the clouds, and the clouds radiate to the earth again—the intervening air allowing the radiant rays to pass freely to and fro without being sensibly heated in itself. But when the sky is clear and still, as in a star-light night, then the heat thrown out by the earth is dissipated through space, and substances at its surface become considerably colder than the air above them. In conformity with the above statement, dew is most abundant, 1st, when a clear night succeeds a still, warm, sun-shiney day, the atmosphere being then high in temperature, and loaded with moisture, in consequence of the previous day's evaporation, and radiation having free scope; 2nd, after rain, partly as above, from the humidity of the air, and partly from the reduction of temperature occasioned by the increased evaporation at the earth's surface; and 3rd, when the density of the air is reduced as shown by the falling of the barometer, a circumstance often attended by a clear sky and frosty dew in the morning, and rain in the latter part of the day. In close, cloudy, dry weather, dew is never to be met with.

It must be obvious, however, to the most casual observer, that different substances are differently affected in regard to dew; a phenomenon for the explanation of which we would require to go into the laws of heat to a much greater extent than our space at present permits. Suffice it to say, that the researches and experiments of science have shewn that different substances possess the property of radiation in a very different degree. 'Good radiators,' says Turner, in his Elements of Chemistry, 'such as grass, wood, the leaves of plants, and filamentous substances in general, reduce their temperatures in favourable states of the weather, ten, twelve, or even