

[1789]

ERASMUS DARWIN

1731--1802

18

from *The Loves of the Plants*

WEAK with nice sense, the chaste MIMOSA* stands,
From each rude touch withdraws her timid hands;
Oft as light clouds o'erpass the Summer-glade,
Alarm'd she trembles at the moving shade;
And feels, alive through all her tender form,
The whisper'd murmurs of the gathering storm;
Shuts her sweet eye-lids to approaching night;
And hails with freshen'd charms the rising light.

Veil'd, with gay decency and modest pride,
Slow to the mosque she moves, an eastern bride;
There her soft vows unceasing love record,
Queen of the bright seraglio of her Lord.---
So sinks or rises with the changeful hour
The liquid silver in its glassy tower.
So turns the needle to the pole it loves,
With fine librations quivering, as it moves.

10

(I. 247--62)

* *Mimosa*. The sensitive plant. Of the class Polygamy, one house. Naturalists have not explained the immediate cause of the collapsing of the sensitive plant; the leaves meet and close in the night during the sleep of the plant, or when exposed to much cold in the day time, in the same manner as when they are affected by external violence, folding their upper surfaces together, and in part over each other like scales or tiles; so as to expose as little of the upper surface as may be to the air; but do not indeed collapse quite so far, since I have found, when touched in the night during their sleep, they fall still further; especially when touched on the foot-stalks between the stems and the leaflets, which seems to be their most sensitive or irritable part. Now as their situation after being exposed to external violence resembles their sleep, but with a greater degree of collapse, may it not be owing to a numbness or paralysis consequent to too violent irritation, like the faintings of animals from pain or fatigue? I kept a sensitive plant in a dark room till some hours after day break, its leaves and leaf-stalks were collapsed as in its most profound sleep, and on exposing it to the light, above twenty minutes passed before the plant was thoroughly awake and had quite expanded itself. During the night the upper or smoother surfaces of the leaves are appressed together, this would seem to shew that the office of this surface of the leaf was to expose the fluids of the plant to the light as well as to the air. Many flowers close up their petals during the night.

On DOVE'S green brink the fair TREMELLA* stood,
 And view'd her playful image in the flood;
 To each rude rock, lone deli, and echoing grove
 Sung the sweet sorrows of her secret love.
 'Oh, stay!---return!'---along the sounding shore
 Cry'd the sad Naiads,---she return'd no more!---
 Now girt with clouds the sullen Evening frown'd,
 And withering Eurus swept along the ground;
 The misty moon withdrew her horned light,
 And sunk with Hesper in the skirt of night 10
 No dim electric streams, (the northern dawn,)
 With meek effulgence quiver'd o'er the lawn;
 No star benignant shot one transient ray
 To guide or light the wanderer on her way.
 Round the dark craggs the murmuring whirlwinds blow,
 Woods groan above, and waters roar below;
 As o'er the steeps with pausing foot she moves,
 The pitying Dryads shriek amid their groves;
 She flies,---she stops,---she pants-she looks behind,
 And hears a demon howl in every wind. 20
 ---As the bleak blast unfurls her fluttering vest,
 Cold beats the snow upon her shuddering breast;
 Through her numb'd limbs the chill sensations dart,
 And the keen ice-bolt trembles at her heart.
 'I sink, I fall! oh, help me, help!' she cries,

* *Tremella*. Clandestine marriage. I have frequently observed funguses of this Genus on old rails and on the ground to become a transparent jelly, after they had been frozen in autumnal mornings; which is a curious property, and distinguishes them from some other vegetable mucilage; for I have observed that the paste, made by boiling wheat-flour in water, ceases to be adhesive after having been frozen. I suspected that the *Tremella Nostoc*, or star-jelly, also had been thus produced; but have since been well informed, that the *Tremella Nostoc* is a mucilage voided by Herons after they have eaten frogs; hence it has the appearance of having been pressed through a hole; and limbs of frogs are said sometimes to be found amongst it; it is always seen upon plains or by the sides of water, places which Herons generally frequent.

Some of the Funguses are so acrid, that a drop of their juice blisters the tongue; others intoxicate those who eat them. The Ostrachs in Siberia use them for the latter purpose; one Fungus of the species, *Agaricus muscarum*, eaten raw; or the decoction of three of them, produces intoxication for 12 or 16 hours. History of Russia. V. I. Nichols. 1780. As all acrid plants become less so, if exposed to a boiling heat, it is probable the common mushroom may sometimes disagree from being not sufficiently stewed. The Ostiacks blister their skin by a fungus found on Birch-trees; and use the *Agaricus officin.* for Soap, (ib.)

There was a dispute whether the funguses should be classed in the animal or vegetable department. Their animal taste in cookery, and their animal smell when burnt, together with their tendency to putrefaction, insomuch that the *Phallus impudicus* has gained the name of stink-horn, and lastly their growing and continuing healthy without light, as the fungus *vinosus* in dark cellars, and the esculent mushrooms on beds covered thick with straw, would seem to shew, that they approach towards the animals, or make a kind of isthmus connecting the two mighty kingdoms of animal and of vegetable nature.

Her stiffening tongue the unfinish'd sound denies;
 Tear after tear adown her cheek succeeds,
 And pearls of ice bestrew the glistening meads;
 Congealing snows her lingering feet surround,
 Arrest her flight, and root her to the ground; 30
 With suppliant arms she pours the silent prayer,
 Her suppliant arms hang crystal in the air;
 Pellucid films her shivering neck o'erspread,
 Seal her mute lips, and silver o'er her head,
 Veil her pale bosom, glaze her lifted hands,
 And shrined in ice the beauteous statue stands.
 --- DOVE's azure nymphs on each revolving year
 For fair TREMELLA shed the tender tear;
 With rush-wove crowns in sad procession move,
 And sound the sorrowing shell to hapless love. 40

(I. 373--412)

CARYO's sweet smile DIANTHUS* proud admires,
 And gazing burns with unallow'd desires;
 With sighs and sorrows her compassion moves,
 And wins the damsel to illicit loves.
 The Monster-offspring heirs the father's pride,
 Mask'd in the damask beauties of the bride.
 So, when the Nightingale in eastern bowers
 On quivering pinion woos the Queen of flowers;

* *Dianthus*. Superbus. Proud Pink. There is a kind of pink called Fairchild's mule, which is here supposed to be produced between a *Dianthus superbus*, and the *Caryophyllus*, Clove. The *Dianthus superbus* emits a most fragrant odour, particularly at night. Vegetable mules supply an irrefragable argument in favour of the sexual system of botany. They are said to be numerous, and like the mules of the animal kingdom not always to continue their species by seed. There is an account of a curious mule from the *Antirrhinum linaria*, Toad-flax, in the *Amænit. academ. V. I. No. 3.* and many hybrid plants described in No. 32. The *Urtica alienata* is an evergreen plant, which appears to be a nettle from the male flowers, and a Pellitory (*Parietaria*) from the female ones and the fruit; and is hence between both. Murray. *Syst. Veg.* Amongst the English indigenous plants the *veronica hybrida* mule Speedwel is supposed to have originated from the officinal one, and the spiked one, and the *Sibthorpia europæa* to have for its parents the golden saxifrage, and marsh pennywort. Pulteney's view of Linneus, p. 250. Mr. Graberg, Mr. Schreber, and Mr. Ramstrom seem of opinion, that the internal structure or parts of fructification in mule plants resemble the female parent, but that the habit or external structure resembles the male parent. See treatises under the above names in V. 6. *Amænit. academic.* The mule produced from a horse and the ass resembles the horse externally with his ears, main, and tail; but with the nature or manners of an ass: but the Hinnus, or creature produced from a male ass, and a mare, resembles the father externally, in stature, ash-colour, and the black cross, but with the nature or manners of a horse. The breed from Spanish rams and Swedish ewes resembled the Spanish sheep in wool, stature and external form; but was as hardy as the Swedish sheep; and the contrary of those, which were produced from Swedish rams and Spanish ewes. The offspring from the male goat of Angora and the Swedish female goat had long soft camel's-hair; but that from the male Swedish goat, and the female one of Angora, had no improvement of their wool. An English ram without horns, and a Swedish horned ewe produced sheep without horns, *Amæn. academ. V. 6. p. 13.*

Inhales her fragrance, as he hangs in air,
 And melts with melody the blushing fair; 10
 Half-rose, half-bird, a beauteous Monster springs,
 Waves his thin leaves, or claps his glossy wings;
 Long horrent thorns his mossy legs surround,
 And tendril-talons root him to the ground;
 Green films of rind his wrinkled neck o'erspread,
 And crimson petals crest his curled head;
 Soft warbling beaks in each bright blossom move,
 And vocal Rosebuds thrill the enchanted grove!---
 Admiring Evening stays her beamy star,
 And still Night listens from his ebon car; 20
 While on white wings descending Houries throng,
 And drink the floods of odour and of song.

(IV. 207--26)

---Fair CHUNDA* smiles amid the burning waste,
 Her brow unturban'd, and her zone unbrac'd;
Ten brother-youths with light umbrellas shade,
 Or fan with busy hands the panting maid;
 Loose wave her locks, disclosing, as they break,
 The rising bosom and averted cheek;
 Clasp'd round her ivory neck with studs of gold
 Flows her thin vest in many a silky fold;
 O'er her light limbs the dim transparence plays,
 And the fair form, it seems to hide, betrays. 10

(IV. 237--46)

Where cool'd by rills, and curtain'd round by woods,
 Slopes the green dell to meet the briny floods,
 The sparkling noon-beams trembling on the tide,

* *Chunda*. Chundali Borrum is the name, which the natives give to this plant; it is the *Hedysarum movens*, or moving plant; its class is two brotherhoods ten males. Its leaves are continually in spontaneous motion, some rising and others falling, and others whirling circularly by twisting their stems; this spontaneous movement of the leaves, when the air is quite still, and very warm, seems to be necessary to the plant, as perpetual respiration is to animal life.

There are many other instances of spontaneous movements of the parts of vegetables. In the *Marchantia polymorpha* some yellow wool proceeds from the flower-bearing anthers, which moves spontaneously in the anther, while it drops its dust like atoms. Murray. Syst. Veg. See note on *Collinsonia* for other instances of vegetable spontaneity. Add to this, that as the sleep of animals consists in a suspension of voluntary motion, and as vegetables are likewise subject to sleep; there is reason to conclude, that the various actions of opening and closing their petals and foliage may be justly ascribed to a voluntary power: for without the faculty of volition, sleep would not have been necessary to them.

The PROTEUS-LOVER* woos his playful bride.
 To win the fair he tries a thousand forms,
 Basks on the sands, or gambols in the storms.---
 A Dolphin now, his scaly sides he laves,
 And bears the sportive damsel on the waves;
 She strikes the cymbal, as he moves along,
 And wondering Ocean listens to the song. 10
 ---And now a spotted pard the Lover stalks,
 Plays round her steps, and guards her favour'd walks;
 As with white teeth he prints her hand, caress'd,
 And lays his velvet paw upon her breast,
 O'er his round face her snowy fingers strain
 The silken knots, and fit the ribbon-rein.
 ---And now a Swan, he spreads his plummy sails,
 And proudly glides before the fanning gales;
 Pleas'd on the flowery brink with graceful hand
 She waves her floating lover to the land; 20
 Bright shines his sinuous neck, with crimson beak
 He prints fond kisses on her glowing cheek,
 Spreads his broad wings, elates his ebon crest,
 And clasps the beauty to his downy breast.

(IV. 363--86)

* *The Proteus-lover*. *Conserva-polymorpha*. This vegetable is put amongst the cryptogamia, or clandestine marriages, by Linneus; but according to Mr. Ellis the males and females are on different plants. *Philos. Trans.* V. 57. It twice changes its colour, from red to brown, and then to black; and changes its form by losing its lower leaves, and elongating some of the upper ones, so as to be mistaken by the unskilful for different plants, it grows on the shores of this country.

There is another plant, *Medicago polymorpha*, which may be said to assume a great variety of shapes; as the seed-vessels resemble sometimes snail-horns, at other times caterpillars with or without long hair upon them, by which means it is probable they sometimes elude the depredations of those insects. *Salicornia* also assumes an animal similitude. *Phil. Bot.* p. 87. See note on *Rubia*.