

gayest colours, adorned with silver and gold and ornamented with ever-varying splendour have naught to do but seek their own pleasure, and charm away their brief existence, fluttering from flower to flower,"—dancing and flirting with their pretty female cousins, and satiating themselves with the sweet nectar, that the goddess Flora serves up in cups and goblets of every shape and every colour.

The members of this order although not, as a rule, so learned or so industrious as those of the order Hymenoptera (especially *Madama Apis Mellifera* and the *Mesieurs Formice*) yet have some families among them, the junior members of which spend the greater part of their time in scientific pursuits, especially in making trigonometrical surveys of this mundane sphere; and as these poor creatures cannot obtain theodolites, and levels, and artificial horizons, they have to measure the whole distances with their bodies, as do the devotees of some Hindoo god, the space which separates their homes from the idol's temple; they are rightly entitled to the honourable title of Geometicians which they have gained.

These "swells" as well as the "common herd" of the insect world, are strong supporters and examples of the doctrine of Metempsychosis: they all undergo various transmigrations and transformations before they arrive at perfection,—each beautiful butterfly, each lovely moth, each handsome beetle, was

"Once a worm, a thing that crept,  
On the bare earth—then wrought a tomb and slept;  
But soon from its lowly cell of clay  
It burst a seraph in the blaze of day."

It almost makes a Pythagorean of a man to see one of these dazzling beauties first in the form of a soft worm-like creeping thing, next like some pious nun or monk whose sands of life have well nigh run—wearing its own shroud or making its own coffin—then lying for a time in its tomb, and at last, suddenly spurning its tiny sepulchre and coming forth in resurrection attire, beautiful as a bride adorned for her husband.

This order of the Lepidoptera may be divided into three great classes; Butterflies, Sphingæ, and Moths. The Butterflies enjoy themselves during the sunny hours of the day, quietly retiring to their homes when night throws her sable mantle over the world. The Sphingæ, (so called from the strong likeness between which some of the juniors bear to the far-famed Sphinx of antiquity,)—make their appearance in the evening and morning during the pleasant hours of twilight. But alas, for morality! the moths like veritable rakes, only come forth in the darkness, and engage in their coquettish amours and illicit enjoyments when there is no eye to see them, and as soon as the sun arises they get them home to their caves and their dens, to sleep off the effects of their debaucheries.

Perhaps it would not be amiss to mention here a few of these "Fashionables," who are domiciled among us. Many of them have been named after ancient gods and demi-gods, kings and heroes. In the first place, among the Butterflies, we have *Papilio Asterias*, who is dressed in a black suit, adorned with two rows of yellow coloured spots, in imitation of buttons. *Papilio Turnus* is robed in yellow, with a black trimming spotted with yellow. *Troilus* and *Philenor* (likewise members of this ancient family of *Papilio*) also clothe themselves in sombre black. Another very common butterfly is *Cobas Philodice*: this creature's colour is yellow, with a dark border to its wings, in the centre of each of which is a silvery eye.

The chiefs of the Moths in Canada are the Saturnians. The Luna Moth, "fair empress of the night," is a splendid creature, with a dress of a delicate pea-green; along the front, there is a broad purple-brownish stripe, while behind are two tails of the same lovely green, after the most approved Parisian fashion. In the centre of each wing is a transparent eye, which rivals the finest diamond, surrounded with rings of white, red, yellow and black. *Attacus Cecropia* and *Polyphemus*, of the same family, are rather larger than the Luna, and although both very fine, want the magic tails. The *Catocala*, although their upper wings are of sombre hues,

yet below they have gorgeous colours: red, yellow, rose colour and magenta abound.

The Sphingæ, as they neither dance in the merry sunshine, nor flit about among the gas-lights, array themselves in very quiet colours. Our chief ones are, the Blind-eyed *Smerinthus*, which is fawn-coloured, clouded with brown, except the hind wings, which are rose-coloured in the middle, and ornamented with an eye-like black spot having a pale blue centre. The Carolina Sphinx measures four inches across the wings, is of a grey colour, variegated with blackish lines and bands; on the body there are ten orange coloured spots encircled with black. The clear winged Sphingæ have transparent wings and fan-shaped tails.

But I must not stay too long with these beautiful "children of the sun," as they have been poetically called, but pass on to the professions; and,

Secondly, of the highest of professional persons—the Preachers. The Preachers, or Mantises, belong to the same races as the musicians, mentioned below. These two families are, in fact, first cousins. A Preacher has a long, thin neck, with short green or greyish brown wings, and very long fore-legs, which they continually hold up heavenwards, in the attitude of prayer. In many countries these insects are considered very sanctimonious; they are said to be so divine, that if a child, who has lost its way, asks one the proper road, it will immediately, with a benign expression of countenance, point with one of its legs in the right direction. In the life of the Jesuit missionary, Saint François Xavier, we read that this celebrated man, on finding a Mantis, "and seeing it holding up its arms in deep devotion, asked it to sing the praises of God, whereupon the insect chanted a very fine canticle!" The Hottentots, also, hold the Mantis in high veneration. According to the traveller Sparrmann, "it is worshipped by them as a tutelary divinity, and if it happens to alight on a man, he is at once looked upon as a saint, and considered the peculiar favourite of Heaven."

But, alas! "all is not gold that glitters"—all are not good who appear to be so; and there are deceivers in the insect world, as well as in the world in which we live and move. And the Mantis—this creature with such a saintly appearance, celebrated for its piety by the Christian Xavier, and revered as a god by the heathen Bushman—is an hypocrite, a wolf in sheep's clothing. "It borrows the livery of heaven to serve the devil in," and assumes this devotional position with its arms raised towards heaven, that it may the more easily seize any poor, unlucky fellow insect that may chance to come within its reach. The Preacher is not only a deceiver of the deepest dye, but is, moreover, of a cruel and blood-thirsty disposition. The Chinese know this characteristic, and keep them in little bamboo cages, and exhibit them to the gaze of the celestial inhabitants as prize fighters. In these pugilistic encounters, the conqueror, to make his victory doubly sure, seizes the vanquished, and *ex vicis!*—gobbles him up "without salt or bread." Whenever a male preacher and his wife (there are female preachers with them as with us, and theirs, like ours, make more noise in the world than the males) happen to have a domestic dispute, the wife, being by no means the weaker vessel, is not content, like good Mrs. Caudle, with giving her spouse "a curtain lecture," but, exhibiting an amount of muscular Christianity quite superfluous, attacks him with "malice aforethought" cuts off his head with a stroke of her scimitar-shaped foot, and devours him. *De gustibus mulierum non est disputandum*. The nature of females is the same everywhere!

Thirdly—I now proceed to mention a few facts about those who follow the profession of which Calliope, the daughter of the mighty Jove, was the patron and muse, and on which the tuneful Orpheus, Jenny Lind, the Black Swan, and a host of other men and women, have bestowed such fame, glory, and renown.

The chief musicians of the insect world are the Crickets. Of all performers, from the days of Tubal-Cain till now, these are the most persevering and enthusiastic. Some fiddle from

morn till eve, others from eve till morn. The great poet Cowper, addressing one of them, says:

"Neither night nor dawn of day  
Puts a period to thy play."

Among the crickets (as among the other insect tribes) the males alone are provided with musical instruments, the females have none. (What a comfort it would be to the world at large if all creatures had such quiet wives!) The instrument in use among the crickets is composed of a part of the wing-covers, the horizontal and overlapping part of which, near the thorax, is convex, and marked with large, strong, and irregularly curved veins. When the cricket wishes to begin his tune, he raises his wing-covers a little, and shuffles them together lengthways, so that the projecting veins of the one wing are made to grate against those of the other. Many people greatly admire the harsh, grating sound (called, by courtesy, music) thus produced. Mr. White, in his extremely fascinating work on the natural history of Selborne, says, that "the shrilling of the field-cricket, though sharp and strident, yet marvellously delights some hearers, filling their minds with a train of summer ideas of everything that is rural, verdurous and joyous." Cowper expressed his ideas on the subject as follows:

"Little inmate, full of mirth,  
Chirping on my kitchen hearth;  
Where-so'er be thine abode,  
Always harbringer of good,  
Pay me for thy warm retreat  
With a song both soft and sweet."

Further on he says, its song

"Endures the winter long,  
Unimpaired and shrill and clear  
Melody throughout the year."

Notwithstanding the opinion of these great men, "many consider the continued and monotonous sound which is kept up the whole night, all through summer and autumn (and by house-crickets during winter as well) both wearisome and sad, and think 'tis irksome at the dead of night to hear the crickets' unwearied chirp." However, it is a wise arrangement of Providence that all men do not admire the same thing.

The Cicada, belonging to the order Hemiptera, also are great musicians. They are lovely creatures, and have been celebrated for their music from the most ancient times. The ancient Greeks considered no sound more agreeable than the song (as they called it) of the cicada. They kept them in cages, the better to enjoy their music, and called them "the Nightingales of the Nymphs," "the Sweet Prophets of the Summer," and "the Loves of the Muses." The cicada were considered the happiest as well as the most innocent of creatures. Anacreon, in one of his odes, compares them to the gods; and Anaxagoras, the philosopher, said that they were most happy, as they had voiceless wives! As among the crickets, so among the cicada—the males are the only performers. They, however, play the kettle-drum, not the violin. The instrument on which they perform so well is thus described by Harris:—"Each male has a pair of kettle-drums, one on either side of the body, and these, in the seventeen-year cicada or locust, are plainly to be seen just behind the wings. These drums are formed of convex pieces of parchment, gathered into numerous fine plaits, and in the species above-named, are lodged in cavities in the sides of the body, behind the thorax. They are not played upon by sticks, but by muscles and cords fastened to the inside of the drums. When these muscles contract and relax (which they do with great rapidity) the drum-heads are alternately tightened and loosened, recovering their natural convexity by their own elasticity. The effect of this rapid alternate tension and relaxation is the production of a rattling sound, like that caused by a succession of quick taps upon a slightly convex and elastic piece of tin plate. Certain cavities within the body of the insect tend to increase the vibrations of the sounds, and add greatly to their intensity." In some species the noise is so great that that it may be heard at the distance of a mile.

These are not the only insects which are blessed with musical powers; but space forbids me noticing any others on this occasion. V.  
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