THE INSECT IN DECORATION. BY M. P. VERNEUIL. TRANSLATED FROM THE FRENCH BY IRENE SARGENT

The artist is surrounded by themes fit for treatment, but if certain subjects attract the decorator, such as those offered by the world of plants, others seem to be almost ignored by him. Among this number is included the world of insects.

Individual artists have, indeed, fallen under the fascination of these forms of life, varying from frail to robust, and showing schemes of color graded from the delicate to the brilliant. But scarcely have the infinite resources which the study of the insect might offer to decorative art been touched below their surface.

A moment since, we alluded to those who have already given attention to this study. We can further point to the happy results which they have obtained from a very restricted number of species: from the grasshopper, from the dragon-fly, and, above all, from butterflies. For, to the decorator, the insect world is usually represented by the butterfly species. This conception is an error, and the decorative artists who are subject to it, would be greatly surprised, if they looked about them, if they sought with enthusiasm and love the inexhaustible, eternal source of inspiration which lies in Nature. What closely kept marvels would they discover, what virgin riches!

Let us quote from Michelet, who said: "The arts proper, that is, the fine arts, would profit still more than industry, by the study of insects. The goldsmith, the lapidary will do well to seek from this realm of Nature models and lessons. The soft insects, like flies, have, in their eyes, especially magical rainbow effects with which no case of jewels, however rich, can bear comparison. There are always, if we pass from one species to another, and, if I mistake not, there are also among different individuals
of the same species, new combinations to record. We observe that flies with brilliant wings do not always possess the most beautiful eyes. For example, the horse-fly, dull gray and dust-like in color, odious of aspect, feeding only upon warm blood, has eyes which, under the magnifying lens, offer the strange, magical effects of a mosaic of precious stones, such as the consummate art of Froment-Meurice could scarcely have combined."

Thus Michelet expressed himself in 1857, in his fine work upon the insect. With what enthusiasm and love he there describes the unexpected mysteries which were then revealed to him.

"The maybug, crudely shaped, prosaic at first sight, promises little. Nevertheless, its scaly wing, examined under the microscope, well lighted beneath the small mirror, and thus seen in transparency, presents the texture of a rich winter fabric of a dead leaf hue, through which veins of a beautiful dark brown wind in serpentine lines. At night, it is all otherwise: there is no more brown, for the yellow portion of the shell has become predominant; by lamplight only it becomes like gold (unworthy comparison), strange, magical, heavenly gold, such as one imagines for the walls of the celestial Jerusalem, and for the garment of light worn by the spirits in the presence of God. This gold is sunlight softer than that which proceeds from the real sun. It charms and touches the heart in an indescribable way.

"It is a strange illusion. And what things have I said? This festival of light proceeded from the wing of a common insect."

To know how to see, to understand Nature, this is the whole secret. In loving it with deep feeling, in examining its most minute and insignificant productions, the artist gains his rich reward of pure pleasure. The entire chapter of Michelet upon the renewal of the arts through the study of insect-life, might be quoted here with profit. But we shall limit our extracts to a few passages.

"In insects, beauty abounds without and within. It is in no wise necessary to search far in order to find it. Let us examine an ordinary insect, specimens of which I constantly find in the sand at Fontainebleau, in sun-lighted spots. This is the brilliant cicindela, which must be handled with precaution, since it is well armed. Very pleasing to the naked eye, it appears under the microscope as perhaps the richest object that can be studied by art. . . . Upon its wings there is a varied design of peacock's eyes. On the corselet, thread-like lines, diversely and lightly knotted, wind over a
dark background. The under surface and the legs are brilliantly glazed with tones so rich that no enamel could support comparison with them: the eye itself can scarcely endure their vivid glow. Strange it is that near the enamels one finds the dull tones of the bloom and of the wings of the butterfly. To all these diverse elements there are added touches of what one might believe to be human art,—touches in the Oriental styles—Persian, Turkish, Indian, as in old textiles, in which the colors, slightly faded, have acquired, so to speak, admirable base notes; their harmony having been gradually subdued by the soft hand of time.

"Frankly speaking, what is similar, what is comparable even to a degree with these, among the expressions of our arts? Languishing as they are, how thoroughly could they refresh themselves at these living sources!

"Usually, instead of having direct recourse to Nature, that inexhaustible fountain of beauty and originality, they have made appeal to the arts of former times, to the past of man."

Does not this quoted passage, written fifty years since, by the great author who studied so sympathetically the Bird and the Insect, define, with perfect comprehension, the state and the needs of decorative art? Let us recognize, however, that we have made progress since that time. Decorative art has rejected, or, at least, has begun to reject copies and constant repetitions. But a long way yet remains to be pursued. Artists have returned to Nature, but what unexplored riches remain, which would allow them to renew and to vary continually the sources of inspiration!

Again, Michelet writes: "Should we copy? By no means. These small creatures, owing to the fact that they are alive and in their mating attire, possess a grace, and are surrounded by an aureola which can not be translated into art. We must love them, gain inspiration from them, derive from them new iridescences and new arrangements of color. So transformed, they will be, not as they appear in Nature, but fantastic and marvelous, such as they are seen by the child who, in his dreams, pursues them, or by the young girl who longs for beautiful ornaments."

Such is Michelet’s magic call from a world too little known to artists. May it inspire certain among them with the desire to see and the will to know!

This world we do not undertake to reveal, for that would be an overwhelming labor.
We have resolved simply to indicate a few of its resources; others, we hope, by advancing deeply into the subject, will derive therefrom valuable knowledge, which they may use to the profit of decorative art, to the furtherance of its renewal in form and harmony.

In these unusual thoughts and words, Michelet pictures the world of insects, an unknown and mysterious realm.

In truth, what do we know of it? The only representatives that our carelessness allows us to perceive are butterflies, dragonflies, bees and flies. Without doubt, these species are among the most interesting selected from the innumerable families of Nature. Others exist which we do not know, which we shall never know, unless, indeed, impelled by our love of study, we devote ourselves to examine them and to investigate minutely their forms and their

"There is a world beneath our world, above it, within it, all around it, which we do not suspect. Lightly, gently, at certain moments, we hear it murmur or rustle, and then we say: 'That is something insignificant; that is nothing.' But that nothing is the infinite.'"
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habits. These are researches attractive in the highest degree to both the artist and the man of science. But the first step here, as always, is the most difficult and the one which costs.

Let us therefore make it together.

The world of insects is almost limitless, whether one considers the number of its different families, or the multitude of its individuals. In entering it, it is well to be provided with a scientific definition of the form of life to be studied.

According to such definition an insect is an animal whose horny skin constitutes an exterior skeleton, and which is, consequently, devoid of an interior skeleton. It has a symmetrical body, and is armed with three pairs of legs and articulated appendices. The last named attributes distinguish them from the crustaceans with which they have several characteristics in common.

 Everywhere insects exist: in air and in water, upon the surface of the earth and beneath it. Their legions are without number, and certain species of them render most valuable services to man. Others, on the contrary, are noxious to him. As to their external forms, they are sometimes remarkable, often strange, and always interesting. Michelet describes them well when he says: “The arsenal of singular weapons borne usually by the insect seems a menace to the human being. Living in a world of warfare, the insect has been armed at all points. The species native to the tropics are formidable in appearance. Nevertheless, the majority of the weapons which affright us: pincers, tentacles, saws, spits, augers (terebræ), probosces, blades and saw-teeth,—all these arms of aggression with which they appear like old soldiers going to war, prove often, after examination, to be peaceful implements which aid them to gain a livelihood. They are the tools of their trade.”

Hard labor is, in reality, often imposed upon them. In order to construct their dwelling-places or the cradles in which the eggs of the mother-insects are laid, immense effort is necessary, and the resulting constructive works overwhelm the mind of the spectator by the perfection and sureness of the means employed and the exquisite skill displayed. To forage the hardest woods and the most exhausted lands; to grind and mix plaster; to rear lofty palaces or to burrow immense subterranean chambers: such labors seem to be merely child’s play for these frail organisms, which compensate for their weakness by the perfection of their tools and by their persistency in the pursuit of their tasks.

The singular appearance of insects results not only from the tools and accessories with which they bristle, but also from the immobility of their countenances, from the absence of all expression in their faces. They are knights clothed in armor, with their visors perpetually lowered. But they are knights who have arrayed themselves in
their most splendid vestments. Nothing is
too beautiful for them: velvet and silk, pre-
cious stones and rare metals, superb ename-
els, laces, brocades, are lavishly used in their
garments. Emeralds, rubies and pearls,
golds dull and burnished, polished silver,
mother-of-pearl mingle, chord, or contrast
with one another. They create the sweet-
est harmonies and the most daring disso-
nances. What lessons do they not afford an
attentive colorist!

Their helmets are surmounted with singu-
lar plumes: the antennae. These are organs
whose functions are as yet undetermined
and which assume the most diverse forms:
appearing in filaments or scales, in combs
or mace-like clubs, or yet in silky tufts.
Here also Nature has given free course to
her fancy.

Near the antennae the eyes are placed.

But all is strange in the insect, and the eyes
are not exempt from the prevailing rule.
There are not simply two eyes: there are
thousands of eyes united in proéminent
masses which are cut in hexagonal facets.
Thus the insect, without moving, can em-
brace the whole horizon. The crustaceans
have, indeed, movable eyes, articulated
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brace the whole horizon. The crustaceans
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all directions; but how much more conven-
ient and serviceable is the eye of the insect
which sees everywhere at once! How in-
comprehensible appears the work of Nature,
which gives two eyes to the human being,
eight thousand to the maybug, and fifteen
thousand to certain other species!

But the most interesting observation to
be made upon insects concerns their succes-
sive transformations.

Animals, for the most part, are born in
the form which, with modifications, they are to retain throughout their life. They grow, they change slightly, but nothing more.

It is quite different with the insect. In order to arrive at its ultimate form, several transformations, several existences, so to speak, are necessary to it, and thence results the material for that most attractive study of metamorphosis.

These transformations are in reality most radical. For example, the light and brilliant butterfly, graceful in flight, glowing in color, begins his life groveling upon the soil, in the state of the repulsive caterpillar. In this case, the metamorphosis is complete.

Among other species, the change is not wholly accomplished and the later phases are less dissimilar from those presented by the insect in the first period of its existence.

But this is not the place to offer a course in natural history. Nevertheless, it was relevant to our purpose to define an insect, although we have used elementary and non-

Study of the locust. Bellery-Desfontaines
the coleoptera, the orthoptera, the hemiptera, the neuroptera, the hymenoptera, the lepidoptera, and the diptera.

We shall rapidly indicate the general characteristics of each one of these orders. The coleoptera are grinding insects, provided with two pairs of dissimilar wings; the upper pair being opaque, hard, horny, and useless for flight. These are the elytra which cover the true wings; the latter being light, membranous and folded downward.

The neuroptera are typified in the beautiful dragon-fly. They are grinding insects, whose four transparent wings, composed of an extremely thin substance, are supported upon a more or less complicated armature of nerves.

The hymenoptera, also, are grinding insects. They, too, are provided with transparent wings, which, however, are less closely ribbed than in the preceding family. The wasp, the bumble-bee and the honey-bee are examples of this natural order.

To the lepidoptera belong the light butterflies, which are sucking insects provided with four scaly wings. These we have purposely set aside together with the dragonflies; reserving them for a future study.
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There remain the diptera, the most disagreeable among insects. They are nippers and suckers, and are well represented by the mosquito.

We have thus faintly outlined the classification of the insect world; seeking, at least, to typify all the orders, omitting the butterflies and the dragon-flies for the reason previously stated, and the mosquitoes, which do not lend themselves to decorative treatment. We shall now speak of the with the whole, it passes afterward to details.

The insect must be presented under all its aspects: it must be seen from above, from below, in profile, anteriorly, posteriorly. Its different habits must be noted: its walk, its repose, its flight. Then follow the details of its members and their articulations, of the wings and their texture, of the head, of the ornamentation of its body, and finally of the color-scheme. In brief, the

Praying-locust in the attitude of combat. M. P.-Verneuil

species which we have selected for examination, as well as of what should constitute a study of insect life.

As in all cases of study from Nature, an examination of the insect, made with a view toward decorative use, should be, primarily, an analysis scrupulous and methodical of external forms. It is certain, nevertheless, that anatomy can be of no use in decorative art. But the observation of external forms must be systematic and logical. Beginning

analysis must be sufficiently complete to permit the artist to reconstruct, without other aid, the insect under examination, in all its positions and its attitudes.

The artists whose designs we here illustrate have not felt themselves obliged to furnish complete studies. But the sketches which we give are, so to speak, excellent indications, and show how the study of Nature may be pursued according to individual temperament and methods.
The grasshopper or locust is the insect which has proven the most interesting to artists. Of this species, M. Benedictus offers us a study worthy of detailed examination. The quality of his drawing causes us to regret its incompleteness. How interesting the profile and the details of the insect would have been drawn by this hand! What character we find here! What strength of structure resides in this little organism! And what a fruitful scheme of ornament the artist can derive from it!

M. Benedictus offers us two fine applications: a plaque in perforated steel, somewhat recalling the guards of Japanese swords. The decorative use of the wings, which are indicated alone by the strong webbing, is most curious and interesting. A comb made from horn, the work of the same artist, is also a study of the grasshopper; two specimens of the insect being confronted.

In another study, M. Benedictus has treated the hercules beetle. The family of this insect is a tropical division of the coleoptera, inhabiting principally Colombia and the Antilles. It is a giant of the insect world, its height attaining twelve and even thirteen centimetres.

Again, in this instance, we must regret that M. Benedictus has only partially studied the insect. The position of the wings gives added interest from the fact that the hercules is the only member of the coleoptera family which is here studied in flight. But how interesting the profile would have been, defining for us the exact form of the horns and giving precise information regarding their articulation! This variety of insect M. Benedictus has utilized in a finely studied clasp.

In a decorative border, M. Mucha has treated the stag-beetle. But he has not perhaps taken all possible advantage of his theme. His study is charming, although it
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is incomplete, since the insect is represented with folded, rather than extended wings. His insects, placed upon sunflowers, do not rest upon the blossoms. Further than the difference of scale between the insects and flowers, which is considerable, the insects are juxtaposed upon the floral motif without uniting with it to form a single design.

As for myself, I do not feel qualified to offer a study of the so-called praying-locust or to treat it decoratively. But let me only be permitted to describe the insect, which is one of the most singular and characteristic of our country. The Prega-Diou of Provence, the Prie-Dieu of the remainder of bristle, harpooning in its flight the unhappy insect, which is thus tortured and devoured alive.

If an adversary of large size appear, the locust does not retire. But, in order to terrify the enemy, it at once transforms itself into a kind of small but frightful dragon. The bust is then contracted and forced inward; the predatory claws, being spread apart, disclose the black and white spots which are constellated upon the inferior surface; the abdomen becomes concave; the upper wings are elongated horizontally; while the lower ones are pointed upward. In truth, the insect then assumes

France, is also the Prophet (Marrus) of the ancient Greeks: these singular names having been acquired by the insect because of the attitudes which it assumes.

Green in color, confounding itself with foliage, this locust awaits for hours, with unwearying patience, the passing of small prey. For the gentle and gracious names under which it passes, conceal the true character of this formidable carnivore. With its bust inflated and tense, in an attitude of reflection, with its long predatory claws folded and joined, the locust appears truly to be absorbed in prayer. But let a gnat pass, and immediately the long claws of the locust extend; the hooks, with which they a strange, ferocious and fantastic attitude. I have represented it thus in combat, and have used this characteristic pose in composing a diadem-comb.

Let me add to this brief study that the triangular head of this insect is movable, and gives to its owner a real and powerful facial expression.

It is quite unnecessary to add in closing that the great Nature-student and artist, M. René Lalique, often introduces insects into the decoration of his jewels. Among such themes we note the grasshopper. It is also useless to observe that M. Lalique treats such themes with great distinction. The