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CONTENTS FOR JULY



	PAGE
FRONTISPIECE (Independence Hall)	
THE DOUBLE PERIL George H. Coomer . . .	157
LITTLE POLLY PRENTISS (Serial) . . . Elizabeth Lincoln Gould . .	161
THE FENCÉ MAN Mrs. F. M. Howard . . .	166
WITH WASHINGTON AT VALLEY FORGE (Serial) W. Bert Foster . . .	170
Illustrated by F. A. Carter	
MIDSUMMER DAYS Julia McNair Wright . . .	179
Illustrated by Nina G. Barlow	
A DAUGHTER OF THE FOREST (Serial) . . Evelyn Raymond . . .	181
FOURTH OF JULY W. F. Fox	187
WOOD-FOLK TALK J. Allison Atwood . . .	188
WITH THE EDITOR	190
EVENT AND COMMENT	191
OUT OF DOORS	192
IN-DOORS (Parlor Magic, Paper V) . . . Ellis Stanyon . . .	193
THE OLD TRUNK (Puzzles)	195
WITH THE PUBLISHER	196

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YOUTH

VOL. I

JULY 1902

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THE DOUBLE PERIL

BY GEORGE H. COOMER

"NONSENSE," said Uncle Hayward;

"how people do like to be scared!

If a real Bengal tiger had made his escape anywhere within twenty miles of here, the whole country would have been up in arms before this time. I've no faith in the story."

"Well, they are not quite sure of it," replied the neighbor who had given the information, "but they think so. The steamer was sunk and some of the animals were drowned, but it is believed that the big tiger escaped in the darkness and got ashore."

"What sort of a show was it?" inquired uncle; "a large menagerie?"

"No, I believe not," was the answer; "only a few animals that some company had hired for the season—a tiger, a jaguar, a pair of leopards, and a few monkeys—that's what they tell me. The steamer had a heavy cargo, and went down very suddenly."

"And they think the tiger made for the woods, eh?" said uncle. "When did it happen, do you say?"

"Night before last—about five miles down the river. 'Twas a small steamer going up to Macon. There was no one lost, I hear."

"Well," remarked uncle, "a Bengal tiger would be an interesting neighbor, that's certain; and I don't believe he would be long

in making his presence known. However, such stories generally require a good deal of allowance. As likely as not, there was no tiger aboard of the steamer, after all."

"Oh, I reckon there was," said the neighbor; "but then, of course, we can't tell; people like excitement, and when such a rumor gets started it grows very fast."

"Yes, that's true; we shall have a whole menagerie ashore here before night. When I was a boy, in Maine, there was a story that a lion and an elephant had made their escape from somebody's show and taken to the woods. And, dear me! it spread like the scarlet fever! The children ran all the way to school and all the way back; and the big girls actually cried in the entry, they were so frightened. Some of the mischievous boys would make 'elephant tracks' in the road, and this added to the panic. But we never could hear of any showman who had lost such animals, and all on a sudden the thing came to nothing. I guess the tiger story will end in the same way."

"Why, father," said Cousin Harold, the fourteen-year-old boy of the family, "I don't see why it isn't likely enough to be true. I almost hope there is something in it, though I shouldn't want him to be killing people's cattle and things. Just think of it—a big Bengal tiger, and right here in Georgia, too!

MIDSUMMER DAYS

BY JULIA MCNAIR WRIGHT

THE production of seed is the chief object of plant life. Upon this depends the continuance of the vegetable world, and therefore all animal existence. From the elephant to the minnow, from the eagle to the humming-bird, life is conditioned upon the constant return of "the herb-bearing fruit whose seed is in itself."

In every minute particular the flower is constructed to insure the production of sound seed. The first form of this seed is the tiny ovule in the germ. Ovules cannot grow into seeds, unless they are brought in contact with the pollen, which must arrive at them by way of the stigma.

The pollen of flowers is a most fine, delicate dust. It must be conveyed without injury in the most delicate manner. Many flowers are exceedingly high up, as on climbing vines, or growing on tree-tops, peaks, or house-tops. Many other plants are very low down, lying close to the ground, as the bluets, chickweed, arbutus, partridge-berry, and others. A large number of plants are in positions inaccessible to man or the larger animals.

Man excepted, the larger animals seem generally to have a destructive mission to plants, devouring, breaking, or trampling down. Men themselves are often ruthless destroyers of beautiful plants, and seem to care for and conserve only what concerns human convenience.

Here, then, we have the problem of plants fixed in their places, needing carriers for their pollen to distant plants of their own kind, at the exact period of maturity. The carriers must be able to go high or low, into all manner of different localities; they must be delicately made, so that they will not injure the plants which they visit, capable

of carrying the frail pollen grains unharmed, and they must have some object of their own in these visitations, which shall infallibly secure their doing of the work required. Finally, let us remember that the pollen of flowers is but seldom spread where it is easy to secure it. The buttercup lavishly expends a golden saucer of pollen; the lily has a wide-open door, near which hangs the antlers, like so many ready bells. On the other hand, how long and narrow are the throats of the morning-glories and honeysuckles; how tiny are the tubes of mint, thyme, and clover; how fast-closed is the mouth of the snap-dragon; how narrow the fox-glove's throat. Pollen-carriers must be able to secure the dust so jealously kept, and must be afforded a reward for their trouble.

What form of animal life meets all these conditions? But one—the insect. It is generally light and delicate in structure, active, winged; its life is conterminous with that of flowers; they are spring and summer guests. The slender shape and the long, slim mouth organs of the insect can penetrate and gently force open flower tubes and the fast-shut lips of corollas; the velvet coats and fine, waving antennæ will receive and carry uninjured the precious dust, and the insect habit of constant roaming from bloom to bloom assures the accomplishment of its important errand.

Not all insects, but a few widely-distributed families, are the chosen partners of the flowers; these are the various tribes of bees, moths, and butterflies, with some help from a few others.

"Nothing for nothing" seems to be a law of nature. What does the flower offer to the insect for its services as pollen distributor? Honey, which is the chief food

of flying insects, also wax, and pollen for its private use at home. The miller, we know, takes toll from the flour he grinds.

To secure insect visitants, the flower provides honey; almost all flowers secrete some dainty juices. As shopkeepers set up signs to inform the public of their wares, so the flowers hang forth signs; these are the brilliant corollas, or parts highly colored which take the place of corollas.

Another bid for visits is made by perfume, which attracts insects as being generally associated with honey. Many flowers have inconspicuous corollas, or are hidden under foliage, or so placed as to risk being neglected; these call attention by fragrance, as the *mignonette*, the *violet*, or *arbutus*. Others, as the *lilies*, have large and attractive corollas, yet add perfume to size and color, to insure the securing of insect attention and help.

Plants which depend upon moths, or any night-flying insects, have usually strong perfume and pale color, as white or light lemon color, which can easily be seen in twilight. The odor attracts the insect in its direction; and on a nearer approach the flower is seen.

Most flowers have peculiarly bright

streaks, spots, or other markings, in the direction of the honey, and the honey is placed at the bottom of the stamens, thus the insect is attracted just where he should go. The *tiger lily* has its startling red spots; the *arum* its lines of red and green; the *morning-glory* its vivid stripes, the *jonquil* its ruffled bi-colored crown, and the *beauty-of-the-night* its bright purple centre.

When the pollen is ripe for carrying, all the parts of the flower are at their best; the perfume is the strongest, the coloring the brightest, the nectar most abundant.

On these hot July days, when the sun draws out the richest fragrance and lights up the most brilliant colors, watch the bees and butterflies. The bee seeks the clover on one trip, *mignonette* on another, *lilies* on a third. The butterflies

have no hive returning to mark their work, but you can count their visits, a dozen or more to flowers of one kind before they investigate the sweets of flowers of some other kind.

So, the plant's partners, while gathering honey for their daily needs, toil unthinkingly to perpetuate the very flowers upon which their existence depends.



PLANTS AND THEIR PARTNERS