

# What's What the World Over

*New Phases of the World's Thinking Recorded in Current Periodicals*

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## THE FOOL CATERPILLAR

*Marched Seven Days in a Circle, Says  
Abbe Fabre*

JEAN HENRI FABRE, the quaint, kindly French naturalist, has recently been amusing himself by studying the social and other habits of a kind of caterpillar, the "Pine Processionary," as it is called. "He is a rope-dancer all his life," comments the droll student in an article in the Fortnightly Review. "He walks only on the tight-rope, a silken rail placed in position as he advances. The caterpillar who chances to be at the head of the procession dribbles his thread without ceasing and fixes it on the path which his fickle preferences cause him to take. The thread is so tiny that the eye, though armed with a magnifying-glass, suspects it rather than sees it. But a second caterpillar steps on the slender foot-board and doubles it with his thread; a third trebles it; and all the others, however many there be, add the sticky spray from their spinnerettes, so much so that, when the procession has marched by, there remains, as a record of its passing, a narrow white ribbon whose dazzling whiteness shimmers in the sun. Very much more sumptuous than ours, their system of road-making consists in upholstering with silk instead of macadamizing.

"What is the use of all this luxury? Could they not, like other caterpillars, walk about without these costly preparations? I see two reasons for their mode of progression. It is night when the Processionaries sally forth to browse upon the pine-leaves. They leave their nest, situated at the top of a bough, in profound darkness; they go down the denuded pole till they come to the nearest branch that has not yet been gnawed, a branch which becomes lower by degrees as the consumers finish stripping the upper storeys; they climb up this untouched branch and spread over the green needles.

"When they have had their suppers and b'g'n to

and from the bough, by a no less angular path, they go back home.

"Apart from sight and smell, what remains to guide them in returning to the nest? The ribbon spun on the road. The spreading maze of the pine-needles is, especially at night, a labyrinth. The Processionary finds his way through it, without the possibility of a mistake, by the aid of his bit of silk. At the time for going home, each easily recovers his own thread or one or other of the neighbouring threads, spread fanwise by the diverging herd; one by one, the scattered tribe line up on the common ribbon, which started from the nest; and the sated caravan finds its way back to the manor with absolute certainty.

"The use of this silk-tapestried roadway is evident from a second point of view. To protect himself against the severity of the winter which he has to face when working, the Pine Caterpillar weaves himself a shelter in which he spends his bad hours, his days of enforced idleness. Alone, with none but the meagre resources of his silk-glands, he would find difficulty in protecting himself on the top of a branch buffeted by the winds. A substantial dwelling, proof against snow, gales and icy fogs, requires the co-operation of a large number. Out of the individual's piled-up atoms the community obtains a spacious and durable establishment.

"The enterprise takes a long time to complete. Every evening, when the weather permits, the building has to be strengthened and enlarged. It is indispensable, therefore, that the corporation of workers should not be dissolved while the stormy season continues and the insects are still in the caterpillar stage. But, without special arrangements, each nocturnal expedition at grazing-time would be a cause of separation.

"The several threads left on the road make this easy. With that guide, every caterpillar, however far he may be, comes back to his companions without ever missing the way. They come hurrying from a host of twigs, from here, from there, from above, from below; and soon the scattered legion reforms into a group. The silk thread is something more than a road-making expedient: it is the social bond, the system that keeps the members of the community indissolubly united.

"At the head of every procession, long or short, goes a first caterpillar, whom I will call the leader of the march or file. Nothing, in fact, distinguishes this caterpillar from the others: it just depends upon the order in which they happen to line up; and mere chance brings him to the front. Among the Processionaries every captain is an officer of fortune. The actual leader leads; presently he will be led, if the file should break up in consequence of some accident and be formed anew in a different order.

"The processions vary greatly in length. The finest that I ever saw manoeuvring on the ground measure twelve or thirteen yards and numbered about three hundred caterpillars, drawn up with absolute precision in a wavy line. But, if there were only two in a row, the order would still be perfect: the second touches and follows the first.

"By February I have seen processions of all lengths walking about my greenhouse. What tricks can I play upon them? I propose to make the caterpillars describe a closed circuit after I have destroyed the ribbons attached to it and liable to bring about a change of direction.

"On the shelf with the layer of sand in which the nests are planted stand some big palm-tubs measuring nearly a yard and a half in circumference at the top. It provides me with a circular track all ready-made. I have nothing to do but wait for an occasion propitious to my plans.

"On January 30th, 1896, a little before twelve o'clock in the day, I discover a numerous troop making their way up there and gradually reaching the cornice. Slowly, in single file, the caterpillars climb the great tub, mount the ledge and advance in regular procession, while others are constantly arriving and continuing the series. I wait for the string to close up, that is to say, for the leader, who keeps following the circular moulding, to return to the point from which he started. My object is achieved in a quarter of an hour. The closed circuit is realized magnificently in something very nearly

approaching a circle. When all preparations are finished, a curious sight awaits us.

"In the uninterrupted circular procession there is no longer a leader. Each caterpillar is preceded by another on whose heels he follows, guided by the silk track, the work of the whole party; he again has a companion close behind him, following him in



A POINTED QUESTION.

Neutral: "But, Your Highness, how is it that a great genius like you needs so many generals?"

Crown Prince: "I must have someone to bear the burden of my errors."

—Punch, Melbourne.

the same orderly way. And this is repeated without variation throughout the length of the chain. None commands, or, rather, none modifies the trail according to his fancy; all obey, trusting in the guide who ought normally to lead the march and who has in reality been done away with by my trickery.

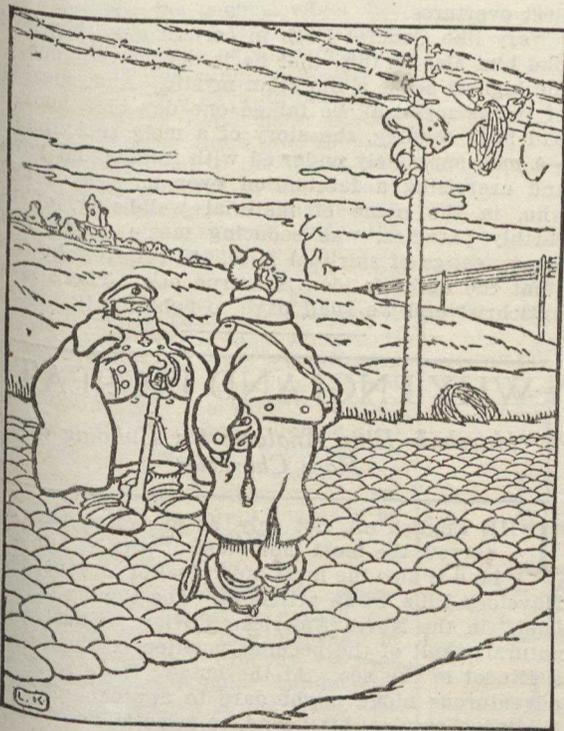
"From the first circuit of the edge of the tub, the rail of silk has been laid in position and is soon turned into a narrow ribbon by the procession, which never ceases dribbling its thread as it goes. The rail is simply doubled and has no branches anywhere, for my brush has destroyed them all. What will the caterpillars do on this deceptive point? Will they walk endlessly round and round until their strength gives out? Or will they, after many attempts, succeed in breaking through their closed circuit, which keeps them on a road without a turning? Will they make up their minds to swerve to this side or that, which is the only method of reaching the green branch over yonder, quite near, not two feet off?

"I thought that they would and I was wrong."

Fabre then describes how for seven days, resting only at nights, the caterpillars marched round and round, looking for food.

"If the road does not vary, the speed does. I measure three and a half inches a minute as the average distance covered. But there are more or less lengthy halts; the pace slackens at times, especially when the temperature falls. At ten o'clock in the evening the walk is little more than a lazy swaying of the body. I foresee an early stop, in consequence of the cold, of fatigue and doubtless also of hunger.

"Now for a little arithmetic. For seven times twenty-four hours the caterpillars have remained on the rim of the tub. So as to make an ample allowance for stops due to the weariness of this one or that and, above all, for the rest taken during the colder hours of the night, we will deduct one-half of the time. This leaves eighty-four hours' walking. The average pace is three and a half inches a minute. The aggregate distance covered, therefore, is considerably more than a quarter of a mile, which is a great walk for these little crawlers. The circumference of the tub, the perimeter of the track, is



A WISE PRECAUTION.

"What! you are barb-wiring the telegraph lines?"

"Yes—in order to stop the passage of the enemy's wireless!"

—Le Rire, Paris.

feel the keen night air, the next thing is to return to the shelter of the house. Measured in a straight line, the distance is not great, hardly an arm's length; but it cannot be covered this way on foot. The caterpillars have to climb down from one crossing to the next, from the needle to the twig, from the twig to the branch, from the branch to the bough;