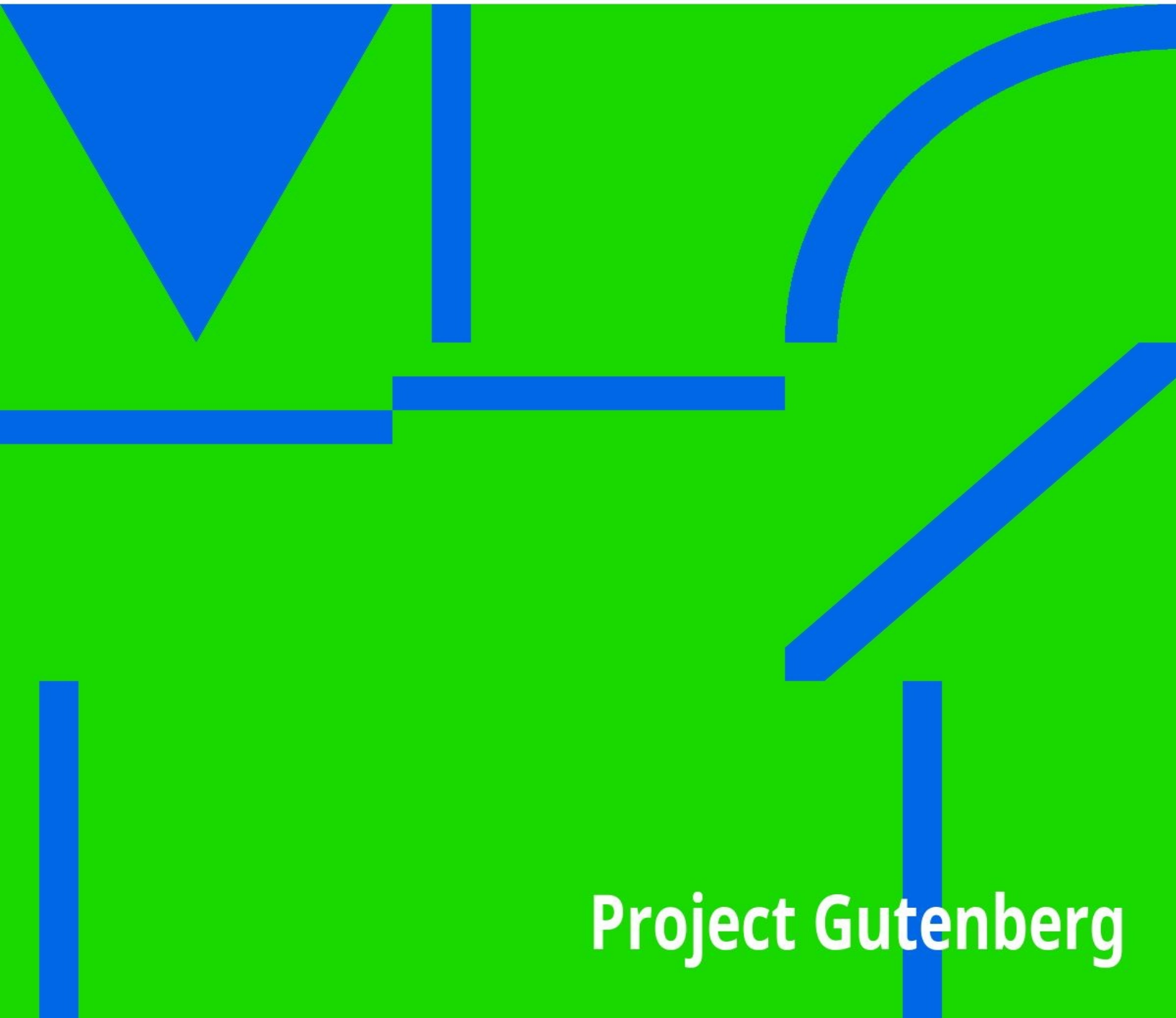
Student Body

F. L. Wallace



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STUDENT BODY

By F. L. WALLACE

Illustrated by ASHMAN

When a really infallible scientific bureau makes a drastically serious error, the data must be wrong ... but wrong in what way?

T

he first morning that they were fully committed to the planet, the executive officer stepped out of the ship. It was not quite dawn. Executive Hafner squinted in the early light; his eyes opened wider, and he promptly went back inside. Three minutes later, he reappeared with the biologist in tow.

"Last night you said there was nothing dangerous," said the executive. "Do you still think it's so?"

Dano Marin stared. "I do." What his voice lacked in conviction, it made up in embarrassment. He laughed uncertainly.

"This is no laughing matter. I'll talk to you later."

The biologist stood by the ship and watched as the executive walked to the row of sleeping colonists.

"Mrs. Athyl," said the executive as he stopped beside the sleeping figure.

She yawned, rubbed her eyes, rolled over, and stood up. The covering that should have been there, however, wasn't. Neither was the garment she had on when she had gone to sleep. She assumed the conventional position of a woman who is astonished to find herself unclad without her knowledge or consent.

"It's all right, Mrs. Athyl. I'm not a voyeur myself. Still, I think you should get some clothing on." Most of the colonists were awake now. Executive Hafner turned to them. "If you haven't any suitable clothing in the ship, the commissary will issue you some. Explanations will be given later."

The colonists scattered. There was no compulsive modesty among them, for it couldn't have survived a year and a half in crowded spaceships. Nevertheless, it was a shock to awaken with no clothing on and not know who or what had removed it during the night. It was surprise more than anything else that disconcerted them.

On his way back to the spaceship, Executive Hafner paused. "Any ideas about it?"

Dano Marin shrugged. "How could I have? The planet is as new to me as it is to you."

"Sure. But you're the biologist."

As the only scientist in a crew of rough-and-ready colonists and builders, Marin was going to be called on to answer a lot of questions that weren't in his field.

"Nocturnal insects, most likely," he suggested. That was pretty weak, though he knew that in ancient times locusts had stripped fields in a matter of hours. Could they do the same with the clothing of humans and not awaken them? "I'll look into the matter. As soon as I find anything, I'll let you know."

"Good." Hafner nodded and went into the spaceship.

D

ano Marin walked to the grove in which the colonists had been sleeping. It had been a mistake to let them bed down there, but at the time the request had been made, there had seemed no reason not to grant it. After eighteen months in crowded ships everyone naturally wanted fresh air and the rustle of leaves overhead.

Marin looked out through the grove. It was empty now; the colonists, both men and women, had disappeared inside the ship, dressing, probably.

The trees were not tall and the leaves were dark bottle-green. Occasional huge white flowers caught sunlight that made them seem larger than they were. It wasn't Earth and therefore the trees couldn't be magnolias. But they reminded Marin of magnolia trees and thereafter he always thought of them as that.

The problem of the missing clothing was ironic. Biological Survey never made a mistake—yet obviously they had. They listed the planet as the most suitable for Man of any so far discovered. Few insects, no dangerous animals, a most equitable climate. They had named it Glade because that was the word which fitted best. The whole land mass seemed to be one vast and pleasant meadow.

Evidently there were things about the planet that Biological Survey had missed.

Marin dropped to his knees and began to look for clues. If insects had been responsible, there ought to be a few dead ones, crushed, perhaps, as the colonists rolled over in their sleep. There were no insects, either live or dead.

He stood up in disappointment and walked slowly through the grove. It might be the trees. At night they could exude a vapor which was capable of dissolving the material from which the clothing had been made. Far-fetched, but not impossible. He crumbled a leaf in his hand and rubbed it against his sleeve. A pungent smell, but nothing happened. That didn't disprove the theory, of course.

He looked out through the trees at the blue sun. It was bigger than Sol, but farther away. At Glade, it was about equal to the Sun on Earth.

He almost missed the bright eyes that regarded him from the underbrush. Almost, but didn't—the domain of biology begins at the edge of the atmosphere; it includes the brush and the small creatures that live in it.

He swooped down on it. The creature fled squealing. He ran it down in the grass outside the grove. It collapsed into quaking flesh as he picked it up. He talked to it gently and the terror subsided.

It nibbled contentedly on his jacket as he carried it back to the ship.

E

xecutive Hafner stared unhappily into the cage. It was an undistinguished

animal, small and something like an undeveloped rodent. Its fur was sparse and stringy, unglamorous; it would never be an item in the fur export trade.

"Can we exterminate it?" asked Hafner. "Locally, that is."

"Hardly. It's ecologically basic."

The executive looked blank. Dano Marin added the explanation: "You know how Biological Control works. As soon as a planet has been discovered that looks suitable, they send out a survey ship loaded with equipment. The ship flies low over a good part of the planet and the instruments in the ship record the neural currents of the animals below. The instruments can distinguish the characteristic neural patterns of anything that has a brain, including insects.

"Anyway, they have a pretty good idea of the kinds of animals on the planet and their relative distribution. Naturally, the survey party takes a few specimens. They have to in order to correlate the pattern with the actual animal, otherwise the neural pattern would be merely a meaningless squiggle on a microfilm.

"The survey shows that this animal is one of only four species of mammals on the planet. It is also the most numerous."

Hafner grunted. "So if we kill them off here, others will swarm in from surrounding areas?"

"That's about it. There are probably millions of them on this peninsula. Of course, if you want to put a barrier across the narrow connection to the mainland, you might be able to wipe them out locally."

The executive scowled. A barrier was possible, but it would involve more work than he cared to expend.

"What do they eat?" he asked truculently.

"A little bit of everything, apparently. Insects, fruits, berries, nuts, succulents, and grain." Dano Marin smiled. "I guess it could be called an omnivore—now that our clothing is handy, it eats that, too."

Hafner didn't smile. "I thought our clothing was supposed to be verminproof."

Marin shrugged. "It is, on twenty-seven planets. On the twenty-eighth, we meet up with a little fella that has better digestive fluids, that's all."

Hafner looked pained. "Are they likely to bother the crops we plant?"

"Offhand, I would say they aren't. But then I would have said the same about our clothing."

Hafner made up his mind. "All right. You worry about the crops. Find some way to keep them out of the fields. Meanwhile, everyone sleeps in the ship until we can build dormitories."

Individual dwelling units would have been more appropriate in the colony at this stage, thought Marin. But it wasn't for him to decide. The executive was a man who regarded a schedule as something to be exceeded.

"The omnivore—" began Marin.

Hafner nodded impatiently. "Work on it," he said, and walked away.

The biologist sighed. The omnivore really was a queer little creature, but it was by no means the most important thing on Glade. For instance, why were there so few species of land animals on the planet? No reptiles, numerous birds, and only four kinds of mammals.

Every comparable planet teemed with a wild variety of life. Glade, in spite of seemingly ideal conditions, hadn't developed. Why?

He had asked Biological Controls for this assignment because it had seemed an interesting problem. Now, apparently, he was being pressed into service as an exterminator.

He reached in the cage and picked up the omnivore. Mammals on Glade were not unexpected. Parallel development took care of that. Given roughly the same kind of environment, similar animals would usually evolve.

In the Late Carboniferous forest on Earth, there had been creatures like the omnivore, the primitive mammal from which all others had evolved. On Glade, that kind of evolution just hadn't taken place. What had kept nature from exploiting its evolutionary potentialities? There was the real problem, not how to wipe them out.

Marin stuck a needle in the omnivore. It squealed and then relaxed. He drew out the blood and set it back in the cage. He could learn a lot about the animal from trying to kill it.

T

he quartermaster was shouting, though his normal voice carried quite well.

"How do you know it's mice?" the biologist asked him.

"Look," said the quartermaster angrily.

Marin looked. The evidence did indicate mice.

Before he could speak, the quartermaster snapped, "Don't tell me they're only mice-like creatures. I know that. The question is: how can I get rid of them?"

"Have you tried poison?"

"Tell me what poison to use and I'll use it."

It wasn't the easiest question to answer. What was poisonous to an animal he had never seen and knew nothing about? According to Biological Survey, the animal didn't exist.

It was unexpectedly serious. The colony could live off the land, and was expected to. But another group of colonists was due in three years. The colony was supposed to accumulate a surplus of food to feed the increased numbers. If they couldn't store the food they grew any better than the concentrates, that surplus was going to be scanty.

Marin went over the warehouse thoroughly. It was the usual early construction on a colonial world. Not esthetic, it was sturdy enough. Fused dirt floor, reinforced foot-thick walls, a ceiling slab of the same. The whole was bound together with a molecular cement that made it practically airtight. It had no windows; there were two doors. Certainly it should keep out rodents.

A closer examination revealed an unexpected flaw. The floor was as hard as glass; no animal could gnaw through it, but, like glass, it was also brittle. The crew that had built the warehouse had evidently been in such a hurry to get back to Earth that they hadn't been as careful as they should have been, for here and there the floor was thin. Somewhere under the heavy equipment piled on it, the floor had cracked. There a burrowing animal had means of entry.

Short of building another warehouse, it was too late to do anything about that.

Mice-like animals were inside and had to be controlled where they were.

The biologist straightened up. "Catch me a few of them alive and I'll see what I can do."

I

n the morning, a dozen live specimens were delivered to the lab. They actually did resemble mice.

Their reactions were puzzling. No two of them were affected by the same poison. A compound that stiffened one in a matter of minutes left the others hale and hearty, and the poison he had developed to control the omnivores was completely ineffective.

The depredations in the warehouse went on. Black mice, white ones, gray and brown, short-tailed and long-eared, or the reverse, they continued to eat the concentrates and spoil what they didn't eat.

Marin conferred with the executive, outlined the problem as he saw it and his ideas on what could be done to combat the nuisance.

"But we can't build another warehouse," argued Hafner. "Not until the atomic generator is set up, at any rate. And then we'll have other uses for the power." The executive rested his head in his hands. "I like the other solution better. Build one and see how it works."

"I was thinking of three," said the biologist.

"One," Hafner insisted. "We can't spare the equipment until we know how it works."

At that he was probably right. They had equipment, as much as three ships could bring. But the more they brought, the more was expected of the colony. The net effect was that equipment was always in short supply.

Marin took the authorization to the engineer. On the way, he privately revised his specifications upward. If he couldn't get as many as he wanted, he might as well get a better one.

In two days, the machine was ready.

It was delivered in a small crate to the warehouse. The crate was opened and the machine leaped out and stood there, poised.

"A cat!" exclaimed the quartermaster, pleased. He stretched out his hand toward the black fuzzy robot.

"If you've touched anything a mouse may have, get your hand away," warned the biologist. "It reacts to smell as well as sight and sound."

Hastily, the quartermaster withdrew his hand. The robot disappeared silently into the maze of stored material.

In one week, though there were still some mice in the warehouse, they were no longer a danger.

T

he executive called Marin into his office, a small sturdy building located in the center of the settlement. The colony was growing, assuming an aspect of permanency. Hafner sat in his chair and looked out over that growth with satisfaction.

"A good job on the mouse plague," he said.

The biologist nodded. "Not bad, except there shouldn't be any mice here. Biological Survey—"

"Forget it," said the exec. "Everybody makes mistakes, even B. S." He leaned back and looked seriously at the biologist. "I have a job I need done. Just now I'm short of men. If you have no objections...."

The exec was always short of men, would be until the planet was overcrowded, and he would try to find someone to do the work his own men should have done. Dano Marin was not directly responsible to Hafner; he was on loan to the expedition from Biological Controls. Still, it was a good idea to cooperate with the executive. He sighed.

"It's not as bad as you think," said Hafner, interpreting the sound correctly. He

smiled. "We've got the digger together. I want you to run it."

Since it tied right in with his investigations, Dano Marin looked relieved and showed it.

"Except for food, we have to import most of our supplies," Hafner explained. "It's a long haul, and we've got to make use of everything on the planet we can. We need oil. There are going to be a lot of wheels turning, and every one of them will have to have oil. In time we'll set up a synthetic plant, but if we can locate a productive field now, it's to our advantage."

"You're assuming the geology of Glade is similar to Earth?"

Hafner waggled his hand. "Why not? It's a nicer twin of Earth."

Why not? Because you couldn't always tell from the surface, thought Marin. It seemed like Earth, but was it? Here was a good chance to find out the history of Glade.

Hafner stood up. "Any time you're ready, a technician will check you out on the digger. Let me know before you go."

A

ctually, the digger wasn't a digger. It didn't move or otherwise displace a gram of dirt or rock. It was a means of looking down below the surface, to any practical depth. A large crawler, it was big enough for a man to live in without discomfort for a week.

It carried an outsize ultrasonic generator and a device for directing the beam into the planet. That was the sending apparatus. The receiving end began with a large sonic lens which picked up sound beams reflected from any desired depth, converted it into electrical energy and thence into an image which was flashed onto a screen.

At the depth of ten miles, the image was fuzzy, though good enough to distinguish the main features of the strata. At three miles, it was better. It could pick up the sound reflection of a buried coin and convert it into a picture on which the date could be seen.

It was to a geologist as a microscope is to a biologist. Being a biologist, Dano Marin could appreciate the analogy.

He started at the tip of the peninsula and zigzagged across, heading toward the isthmus. Methodically, he covered the territory, sleeping at night in the digger. On the morning of the third day, he discovered oil traces, and by that afternoon he had located the main field.

He should probably have turned back at once, but now that he had found oil, he investigated more deliberately. Starting at the top, he let the image range downward below the top strata.

It was the reverse of what it should have been. In the top few feet, there were plentiful fossil remains, mostly of the four species of mammals. The squirrel-like creature and the far larger grazing animal were the forest dwellers. Of the plains animals, there were only two, in size fitting neatly between the extremes of the forest dwellers.

After the first few feet, which corresponded to approximately twenty thousand years, he found virtually no fossils. Not until he reached a depth which he could correlate to the Late Carboniferous age on Earth did fossils reappear. Then they were of animals appropriate to the epoch. At that depth and below, the history of Glade was quite similar to Earth's.

Puzzled, he checked again in a dozen widely scattered localities. The results were always the same—fossil history for the first twenty thousand years, then none for roughly a hundred million. Beyond that, it was easy to trace the thread of biological development.

In that period of approximately one hundred million years, something unique had happened to Glade. What was it?

On the fifth day his investigations were interrupted by the sound of the keyed-on radio.

"Marin."

"Yes?" He flipped on the sending switch.

"How soon can you get back?"

He looked at the photo-map. "Three hours. Two if I hurry."

"Make it two. Never mind the oil."

"I've found oil. But what's the matter?"

"You can see it better than I can describe it. We'll discuss it when you get back."

R

eluctantly, Marin retracted the instruments into the digger. He turned it around and, with not too much regard for the terrain, let it roar. The treads tossed dirt high in the air. Animals fled squealing from in front of him. If the grove was small enough, he went around it, otherwise he went through and left matchsticks behind.

He skidded the crawler ponderously to halt near the edge of the settlement. The center of activity was the warehouse. Pickups wheeled in and out, transferring supplies to a cleared area outside. He found Hafner in a corner of the warehouse, talking to the engineer.

Hafner turned around when he came up. "Your mice have grown, Marin."

Marin looked down. The robot cat lay on the floor. He knelt and examined it. The steel skeleton hadn't broken; it had been bent, badly. The tough plastic skin had been torn off and, inside, the delicate mechanism had been chewed into an unrecognizable mass.

Around the cat were rats, twenty or thirty of them, huge by any standards. The cat had fought; the dead animals were headless or disemboweled, unbelievably battered. But the robot had been outnumbered.

Biological Survey had said there weren't any rats on Glade. They had also said that about mice. What was the key to their error?

The biologist stood up. "What are you going to do about it?"

"Build another warehouse, two-foot-thick fused dirt floors, monolithic construction. Transfer all perishables to it."

Marin nodded. That would do it. It would take time, of course, and power, all they could draw out of the recently set up atomic generator. All other

construction would have to be suspended. No wonder Hafner was disturbed.

"Why not build more cats?" Marin suggested.

The executive smiled nastily. "You weren't here when we opened the doors. The warehouse was swarming with rats. How many robot cats would we need—five, fifteen? I don't know. Anyway the engineer tells me we have enough parts to build three more cats. The one lying there can't be salvaged."

It didn't take an engineer to see that, thought Marin.

Hafner continued, "If we need more, we'll have to rob the computer in the spaceship. I refuse to permit that."

Obviously he would. The spaceship was the only link with Earth until the next expedition brought more colonists. No exec in his right mind would permit the ship to be crippled.

But why had Hafner called him back? Merely to keep him informed of the situation?

H

afner seemed to guess his thoughts. "At night we'll floodlight the supplies we remove from the warehouse. We'll post a guard armed with decharged rifles until we can move the food into the new warehouse. That'll take about ten days. Meanwhile, our fast crops are ripening. It's my guess the rats will turn to them for food. In order to protect our future food supply, you'll have to activate your animals."

The biologist started. "But it's against regulations to loose any animal on a planet until a complete investigation of the possible ill effects is made."

"That takes ten or twenty years. This is an emergency and I'll be responsible—in writing, if you want."

The biologist was effectively countermanded. Another rabbit-infested Australia or the planet that the snails took over might be in the making, but there was nothing he could do about it.

"I hardly think they'll be of any use against rats this size," he protested.

"You've got hormones. Apply them." The executive turned and began discussing construction with the engineer.

M

arin had the dead rats gathered up and placed in the freezer for further study.

After that, he retired to the laboratory and worked out a course of treatment for the domesticated animals that the colonists had brought with them. He gave them the first injections and watched them carefully until they were safely through the initial shock phase of growth. As soon as he saw they were going to survive, he bred them.

Next he turned to the rats. Of note was the wide variation in size. Internally, the same thing was true. They had the usual organs, but the proportions of each varied greatly, more than is normal. Nor were their teeth uniform. Some carried huge fangs set in delicate jaws; others had tiny teeth that didn't match the massive bone structure. As a species, they were the most scrambled the biologist had ever encountered.

He turned the microscope on their tissues and tabulated the results. There was less difference here between individual specimens, but it was enough to set him pondering. The reproductive cells were especially baffling.

Late in the day, he felt rather than heard the soundless whoosh of the construction machinery. He looked out of the laboratory and saw smoke rolling upward. As soon as the vegetation was charred, the smoke ceased and heat waves danced into the sky.

They were building on a hill. The little creatures that crept and crawled in the brush attacked in the most vulnerable spot, the food supply. There was no brush, not a blade of grass, on the hill when the colonists finished.

T

erriers. In the past, they were the hunting dogs of the agricultural era. What they lacked in size they made up in ferocity toward rodents. They had earned their keep originally in granaries and fields, and, for a brief time, they were doing it again on colonial worlds where conditions were repeated.

The dogs the colonists brought had been terriers. They were still as fast, still with the same anti-rodent disposition, but they were no longer small. It had been a difficult job, yet Marin had done it well, for the dogs had lost none of their skill and speed in growing to the size of a great dane.

The rats moved in on the fields of fast crops. Fast crops were made to order for a colonial world. They could be planted, grown, and harvested in a matter of weeks. After four such plantings, the fertility of the soil was destroyed, but that meant nothing in the early years of a colonial planet, for land was plentiful.

The rat tide grew in the fast crops, and the dogs were loosed on the rats. They ranged through the fields, hunting. A rush, a snap of their jaws, the shake of a head, and the rat was tossed aside, its back broken. The dogs went on to the next.

Until they could not see, the dogs prowled and slaughtered. At night they came in bloody, most of it not their own, and exhausted. Marin pumped them full of antibiotics, bandaged their wounds, fed them through their veins, and shot them into sleep. In the morning he awakened them with an injection of stimulant and sent them tingling into battle.

It took the rats two days to learn they could not feed during the day. Not so numerous, they came at night. They climbed on the vines and nibbled the fruit. They gnawed growing grain and ravaged vegetables.

The next day the colonists set up lights. The dogs were with them, discouraging the few rats who were still foolish enough to forage while the sun was overhead.

An hour before dusk, Marin called the dogs in and gave them an enforced rest. He brought them out of it after dark and took them to the fields, staggering. The scent of rats revived them; they were as eager as ever, if not quite so fast.

The rats came from the surrounding meadows, not singly, or in twos and threes, as they had before; this time they came together. Squealing and rustling the grass, they moved toward the fields. It was dark, and though he could not see them, Marin could hear them. He ordered the great lights turned on in the area of the fields.

The rats stopped under the glare, milling around uneasily. The dogs quivered and whined. Marin held them back. The rats resumed their march, and Marin released the dogs.

The dogs charged in to attack, but didn't dare brave the main mass. They picked off the stragglers and forced the rats into a tighter formation. After that the rats were virtually unassailable.

The colonists could have burned the bunched-up rats with the right equipment, but they didn't have it and couldn't get it for years. Even if they'd had it, the use of such equipment would endanger the crops, which they had to save if they could. It was up to the dogs.

The rat formation came to the edge of the fields, and broke. They could face a common enemy and remain united, but in the presence of food, they forgot that unity and scattered—hunger was the great divisor. The dogs leaped joyously in pursuit. They hunted down the starved rodents, one by one, and killed them as they ate.

When daylight came, the rat menace had ended.

The next week the colonists harvested and processed the food for storage and immediately planted another crop.

Marin sat in the lab and tried to analyze the situation. The colony was moving from crisis to crisis, all of them involving food. In itself, each critical situation was minor, but lumped together they could add up to failure. No matter how he looked at it, they just didn't have the equipment they needed to colonize Glade.

The fault seemed to lie with Biological Survey; they hadn't reported the presence of pests that were endangering the food supply. Regardless of what the exec thought about them, Survey knew their business. If they said there were no mice or rats on Glade, then there hadn't been any—*when the survey was made*.

The question was: when did they come and how did they get here?

Marin sat and stared at the wall, turning over hypotheses in his mind, discarding them when they failed to make sense.

His gaze shifted from the wall to the cage of the omnivores, the squirrel-size forest creature. The most numerous animal on Glade, it was a commonplace sight to the colonists.

And yet it was a remarkable animal, more than he had realized. Plain, insignificant in appearance, it might be the most important of any animal Man had encountered on the many worlds he had settled on. The longer he watched, the more Marin became convinced of it.

He sat silent, observing the creature, not daring to move. He sat until it was dark and the omnivore resumed its normal activity.

Normal? The word didn't apply on Glade.

The interlude with the omnivore provided him with one answer. He needed another one; he thought he knew what it was, but he had to have more data, additional observations.

He set up his equipment carefully on the fringes of the settlement. There and in no other place existed the information he wanted.

He spent time in the digger, checking his original investigations. It added up to a complete picture.

When he was certain of his facts, he called on Hafner.

The executive was congenial; it was a reflection of the smoothness with which the objectives of the colony were being achieved.

"Sit down," he said affably. "Smoke?"

The biologist sat down and took a cigarette.

"I thought you'd like to know where the mice came from," he began.

Hafner smiled. "They don't bother us any more."

"I've also determined the origin of the rats."

"They're under control. We're doing nicely."

O

n the contrary, thought Marin. He searched for the proper beginning.

"Glade has an Earth-type climate and topography," he said. "Has had for the past twenty thousand years. Before that, about a hundred million years ago, it was also like Earth of the comparable period."

He watched the look of polite interest settle on the executive's face as he stated the obvious. Well, it *was* obvious, up to a point. The conclusions weren't, though.

"Between a hundred million years and twenty thousand years ago, something happened to Glade," Marin went on. "I don't know the cause; it belongs to cosmic history and we may never find out. Anyway, whatever the cause—fluctuations in the sun, unstable equilibrium of forces within the planet, or perhaps an encounter with an interstellar dust cloud of variable density—the climate on Glade changed.

"It changed with inconceivable violence and it kept on changing. A hundred million years ago, plus or minus, there was carboniferous forest on Glade. Giant reptiles resembling dinosaurs and tiny mammals roamed through it. The first great change wiped out the dinosaurs, as it did on Earth. It didn't wipe out the still more primitive ancestor of the omnivore, because it could adapt to changing conditions.

"Let me give you an idea how the conditions changed. For a few years a given area would be a desert; after that it would turn into a jungle. Still later a glacier would begin to form. And then the cycle would be repeated, with wild variations. All this might happen—did happen—within a span covered by the lifetime of a single omnivore. This occurred many times. For roughly a hundred million years, it was the norm of existence on Glade. This condition was hardly conducive to the preservation of fossils."

Hafner saw the significance and was concerned. "You mean these climatic fluctuations suddenly stopped, twenty thousand years ago? Are they likely to begin again?"

"I don't know," confessed the biologist. "We can probably determine it if we're interested."

The exec nodded grimly. "We're interested, all right."

Maybe we are, thought the biologist. He said, "The point is that survival was difficult. Birds could and did fly to more suitable climates; quite a few of them

survived. Only one species of mammals managed to come through."

"Your facts are not straight," observed Hafner. "There are four species, ranging in size from a squirrel to a water buffalo."

"One species," Marin repeated doggedly. "They're the same. If the food supply for the largest animal increases, some of the smaller so-called species grow up. Conversely, if food becomes scarce in any category, the next generation, which apparently can be produced almost instantly, switches to a form which does have an adequate food supply."

"The mice," Hafner said slowly.

M

arin finished the thought for him. "The mice weren't here when we got here. They were born of the squirrel-size omnivore."

Hafner nodded. "And the rats?"

"Born of the next larger size. After all, we're environment, too—perhaps the harshest the beasts have yet faced."

Hafner was a practical man, trained to administer a colony. Concepts were not his familiar ground. "Mutations, then? But I thought—"

The biologist smiled. It was thin and cracked at the edges of his mouth. "On Earth, it would be mutation. Here it is merely normal evolutionary adaptation." He shook his head. "I never told you, but omnivores, though they could be mistaken for an animal from Earth, have no genes or chromosomes. Obviously they do have heredity, but how it is passed down, I don't know. However it functions, it responds to external conditions far faster than anything we've ever encountered."

Hafner nodded to himself. "Then we'll never be free from pests." He clasped and unclasped his hands. "Unless, of course, we rid the planet of all animal life."

"Radioactive dust?" asked the biologist. "They have survived worse."

The exec considered alternatives. "Maybe we should leave the planet and leave it

to the animals."

"Too late," said the biologist. "They'll be on Earth, too, and all the planets we've settled on."

Hafner looked at him. The same pictures formed in his mind that Marin had thought of. Three ships had been sent to colonize Glade. One had remained with the colonists, survival insurance in case anything unforeseen happened. Two had gone back to Earth to carry the report that all was well and that more supplies were needed. They had also carried specimens from the planet.

The cages those creatures were kept in were secure. But a smaller species could get out, must already be free, inhabiting, undetected, the cargo spaces of the ships.

There was nothing they could do to intercept those ships. And once they reached Earth, would the biologists suspect? Not for a long time. First a new kind of rat would appear. A mutation could account for that. Without specific knowledge, there would be nothing to connect it with the specimens picked up from Glade.

"We have to stay," said the biologist. "We have to study them and we can do it best here."

He thought of the vast complex of buildings on Earth. There was too much invested to tear them down and make them verminproof. Billions of people could not be moved off the planet while the work was being done.

They were committed to Glade not as a colony, but as a gigantic laboratory. They had gained one planet and lost the equivalent of ten, perhaps more when the destructive properties of the omnivores were finally assessed.

A rasping animal cough interrupted the biologist's thoughts. Hafner jerked his head and glanced out the window. Lips tight, he grabbed a rifle off the wall and ran out. Marin followed him.

T

he exec headed toward the fields where the second fast crop was maturing. On top of a knoll, he stopped and knelt. He flipped the dial to *extreme charge*,

aimed, and fired. It was high; he missed the animal in the field. A neat strip of smoking brown appeared in the green vegetation.

He aimed more carefully and fired again. The charge screamed out of the muzzle. It struck the animal on the forepaw. The beast leaped high in the air and fell down, dead and broiled.

They stood over the animal Hafner had killed. Except for the lack of markings, it was a good imitation of a tiger. The exec prodded it with his toe.

"We chase the rats out of the warehouse and they go to the fields," he muttered. "We hunt them down in the fields with dogs and they breed tigers."

"Easier than rats," said Marin. "We can shoot tigers." He bent down over the slain dog near which they had surprised the big cat.

The other dog came whining from the far corner of the field to which he had fled in terror. He was a courageous dog, but he could not face the great carnivore. He whimpered and licked the face of his mate.

The biologist picked up the mangled dog and headed toward the laboratory.

"You can't save her," said Hafner morosely. "She's dead."

"But the pups aren't. We'll need them. The rats won't disappear merely because tigers have showed up."

The head drooped limply over his arm and blood seeped into his clothing as Hafner followed him up the hill.

"We've been here three months," the exec said suddenly. "The dogs have been in the fields only two. And yet the tiger was mature. How do you account for something like that?"

Marin bent under the weight of the dog. Hafner never would understand his bewilderment. As a biologist, all his categories were upset. What did evolution explain? It was a history of organic life on a particular world. Beyond that world, it might not apply.

Even about himself there were many things Man didn't know, dark patches in his knowledge which theory simply had to pass over. About other creatures, his ignorance was sometimes limitless.

Birth was simple; it occurred on countless planets. Meek grazing creatures, fierce carnivores—the most unlikely animals gave birth to their young. It happened all the time. And the young grew up, became mature and mated.

He remembered that evening in the laboratory. It was accidental—what if he had been elsewhere and not witnessed it? They would not know what little they did.

He explained it carefully to Hafner. "If the survival factor is high and there's a great disparity in size, the young need not ever be young. They may be born as fully functioning adults!"

A

lthough not at the rate it had initially set, the colony progressed. The fast crops were slowed down and a more diversified selection was planted. New buildings were constructed and the supplies that were stored in them were spread out thin, for easy inspection.

The pups survived and within a year shot up to maturity. After proper training, they were released to the fields where they joined the older dogs. The battle against the rats went on; they were held in check, though the damage they caused was considerable.

The original animal, unchanged in form, developed an appetite for electrical insulation. There was no protection except to keep the power on at all times. Even then there were unwelcome interruptions until the short was located and the charred carcass was removed. Vehicles were kept tightly closed or parked only in verminproof buildings. While the plague didn't increase in numbers, it couldn't be eliminated, either.

There was a flurry of tigers, but they were larger animals and were promptly shot down. They prowled at night, so the colonists were assigned to guard the settlement around the clock. Where lights failed to reach, the infra-red 'scope did. As fast as they came, the tigers died. Except for the first one, not a single dog was lost.

The tigers changed, though not in form. Externally, they were all big and powerful killers. But as the slaughter went on, Marin noticed one astonishing

fact—the internal organic structure became progressively more immature.

The last one that was brought to him for examination was the equivalent of a newly born cub. That tiny stomach was suited more for the digestion of milk than meat. How it had furnished energy to drive those great muscles was something of a miracle. But drive it had, for a murderous fifteen minutes before the animal was brought down. No lives were lost, though sick bay was kept busy for a while.

That was the last tiger they shot. After that, the attacks ceased.

The seasons passed and nothing new occurred. A spaceship civilization or even that fragment of it represented by the colony was too much for the creature, which Marin by now had come to think of as the "Omnimal." It had evolved out of a cataclysmic past, but it could not meet the challenge of the harshest environment.

Or so it seemed.

T

hree months before the next colonists were due, a new animal was detected. Food was missing from the fields. It was not another tiger: they were carnivorous. Nor rats, for vines were stripped in a manner that no rodent could manage.

The food was not important. The colony had enough in storage. But if the new animal signaled another plague, it was necessary to know how to meet it. The sooner they knew what the animal was, the better defense they could set up against it.

Dogs were useless. The animal roamed the field they were loose in, and they did not attack nor even seem to know it was there.

The colonists were called upon for guard duty again, but it evaded them. They patrolled for a week and they still did not catch sight of it.

Hafner called them in and rigged up an alarm system in the field most frequented by the animal. It detected that, too, and moved its sphere of operations to a field in which the alarm system had not been installed.

Hafner conferred with the engineer, who devised an alarm that would react to body radiation. It was buried in the original field and the old alarm was moved to another.

Two nights later, just before dawn, the alarm rang.

Marin met Hafner at the edge of the settlement. Both carried rifles. They walked; the noise of any vehicle was likely to frighten the animal. They circled around and approached the field from the rear. The men in the camp had been alerted. If they needed help, it was ready.

They crept silently through the underbrush. It was feeding in the field, not noisily, yet they could hear it. The dogs hadn't barked.

They inched nearer. The blue sun of Glade came up and shone full on their quarry. The gun dropped in Hafner's hand. He clenched his teeth and raised it again.

Marin put out a restraining arm. "Don't shoot," he whispered.

"I'm the exec here. I say it's dangerous."

"Dangerous," agreed Marin, still in a whisper. "That's why you can't shoot. It's more dangerous than you know."

Hafner hesitated and Marin went on. "The omnimal couldn't compete in the changed environment and so it evolved mice. We stopped the mice and it countered with rats. We turned back the rat and it provided the tiger.

"The tiger was easiest of all for us and so it was apparently stopped for a while. But it didn't really stop. Another animal was being formed, the one you see there. It took the omnimal two years to create it—how, I don't know. A million years were required to evolve it on Earth."

Hafner hadn't lowered the rifle and he showed no signs of doing so. He looked lovingly into the sights.

"Can't you see?" urged Marin. "We can't destroy the omnimal. It's on Earth now, and on the other planets, down in the storage areas of our big cities, masquerading as rats. And we've never been able to root out even our own terrestrial rats, so how can we exterminate the omnimal?"

"All the more reason to start now." Hafner's voice was flat.

Marin struck the rifle down. "Are their rats better than ours?" he asked wearily. "Will their pests win or ours be stronger? Or will the two make peace, unite and interbreed, make war on us? It's not impossible; the omnimal could do it if interbreeding had a high survival factor.

"Don't you still see? There is a progression. After the tiger, it bred this. If this evolution fails, if we shoot it down, what will it create next? This creature I think we can compete with. *It's the one after this that I do not want to face.*"

I

t heard them. It raised its head and looked around. Slowly it edged away and backed toward a nearby grove.

The biologist stood up and called softly. The creature scurried to the trees and stopped just inside the shadows among them.

The two men laid down their rifles. Together they approached the grove, hands spread open to show they carried no weapons.

It came out to meet them. Naked, it had had no time to learn about clothing. Neither did it have weapons. It plucked a large white flower from the tree and extended this mutely as a sign of peace.

"I wonder what it's like," said Marin. "It seems adult, but can it be, all the way through? What's inside that body?"

"I wonder what's in his head," Hafner said worriedly.

It looked very much like a man.

—F. L. WALLACE

States.

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