



**STORY FROM THE START**

Dr. Ronald McAllister, famous in his special work—applied psychology—employs his leisure time in the elucidation of crime mysteries. As the narrative opens he is interested with Assistant District Attorney Ashton in the murder, in the small town of Oak Ridge, of a recluse, Henry Morgan. The murdered man, his papers reveal, had been in New Zealand, where Doctor McAllister had lived in his youth. Will Harvey has testified he saw a woman wearing a green cloak in the Morgan home the night of the murder. Doctor Reinhardt, friend of McAllister, telephones he has a queer case in his hospital and invites McAllister to see the patient. Doctor Reinhardt's patient proves to be a young woman, who in unconscious mutters in a language Reinhardt does not understand. McAllister sees a possible connection between the murdered New Zealander and the girl. A carefully hidden map is discovered. A girl enters the house in the darkness and escapes, leaving a green cloak behind.

**CHAPTER IV—Continued**

"I was on the point of telephoning for you," he said, "but you've saved the precious hour or two by coming on your own account. Mallory reported to me here at six o'clock this morning, having come all the way from Oak Ridge on foot, and without getting the slightest trace of the mysterious woman who invaded the Morgan house last night. I confess that her appearance throws a different light on Harvey's testimony. And I think you'll agree that, in all probability, she is the criminal."

"I've no doubt myself," said Doctor McAllister, "that it was her hands that strangled old Morgan."

"Well, then, she's the criminal, isn't she?" said Ashton; and regarding the answer to this question as too obvious to be waited for, he went straight on. "The whole energies of the police and of all the detective force connected with our office will be bent toward finding her. What I want from you—both of you, independently—is the most complete and careful description you can give of the physical appearance of the woman who entered Henry Morgan's study last night."

"You can describe her for yourself," said Doctor McAllister rather shortly. "You have a talent that way."

"What do you mean?"

"You've seen her. You've enjoyed a good look at her. She's the girl that Reinhardt sent for us to see at St. Michael's two nights ago."

Ashton stared in clear amazement, first at the doctor and then at me.

"You're sure?" he gasped.

"Perfectly," said I gravely.

For a moment he sat silent. Then he frowned.

"May I ask whether you had any suspicion, when we saw her there at the hospital, that she might prove to have some connection with this case?"

"Yes," said my chief bluntly; "it's your right to ask. I did suspect a connection between her and the Oak Ridge mystery. I recognized and understood the language in which she was chattering to herself. It's a language that, with minor variations, is spoken in all those islands in the South Pacific. The thing she was singing to herself was a death chant."

Ashton looked pretty grave at that. "I won't presume," he said, "to question your motive for your reticence with me the other night. Undoubtedly it seemed justifiable to you, but, as a result of it, a dangerous criminal is now at large. I admit it was not a result you could have foreseen, for I remember your recommendation that she be closely watched, and I have no doubt that with the clew you've just given me it won't be many hours before we find her. A strange creature like that, half-wild, chattering a language that no one can understand, cannot remain hidden very long. I can't understand, though," he went on, "the reason you gentlemen have for wishing to withhold from me your full confidence. You haven't given it to me yet. You've discovered something more that bears upon this case which I haven't heard of."

"We have," said the doctor, "and it was with the purpose of telling you about it that we came back to town this morning—that was part of our purpose, at any rate. Do you remember the green cloak which you so confidently declared to be nothing but a bit of fiction, born of Will Harvey's puerile vanity? Well, we've found that. A green cloak, with a high collar, just as Harvey described it."

Ashton eagerly demanded the details as to where and how the cloak was found, and these I supplied him with.

Then there was a little silence. His displeasure over our previous reticence

was suddenly swallowed up in his interest in the revelations we made to him.

"That's one to Mallory, certainly," he said at last. "He was right and I was wrong."

"How do you make that out?" I questioned.

"Didn't I tell you that Mallory suspected Harvey of some active connection with the crime, and thought that he was lying to shield himself? The discovery of the cloak makes it evident that he was right. He knew who the actual criminal was, knows now, and was undoubtedly associated with her. He probably thought to save himself by giving us the clew that would lead to her detection. In his eagerness, he overreached himself and told too much, told more than he could possibly have seen, if his testimony as to how he saw it were true."

He broke off there with a short laugh. "But confess," he said, turning to my chief, "confess that your theory of associative illusion completely out of court. Harvey testified to a black-haired woman in a green cloak, and denies that he saw more of her than her silhouette upon the shade. We know now that a black-haired woman in a green cloak was actually there, from which it follows that Harvey lied, knew that he lied. And to have lied thus about a matter which he knew to be vital and significant, he must have some powerful, and probably glib, motive. I don't believe that you can get away from the logic of that."

"Your conclusion is probable," said my chief, "but it's not inevitable."

Ashton dismissed the denial with a mere tolerant shrug, and set it down to the obstinacy of old age.

"You brought the cloak to town with you, I suppose," he went on presently.

I nodded. "You'll want it, I presume?"

"Yes, he said. "It may prove a valuable bit of bait, not for the girl herself, of course, but possibly for one of her accomplices. I'll have Harvey arrested at once. Surveillance isn't good enough for him now; I want him in jail."

"You promised me a chance at Harvey after you got through with him. Do you remember?" said the doctor.

"I hope you don't mean to withdraw it."

Ashton stared at him. "You still think you can beat up anything in that covert?" he asked incredulously. "Oh, well, I've no objection to your trying. I'll have him arrested at once and brought to town. Where do you want him? At your laboratory?"

"Yes," said the doctor. "When may we expect him? This afternoon, some time?"

"Yes," said Ashton. "Not later than four o'clock."

The doctor swallowed the last of his coffee, pushed back his chair, and rose to his great ungainly height.

"Now, let's have an understanding," said he. "I've given you, freely, all the information you've asked for. It comprises pretty much all the information you have which can be of any service to you in the solution of the mystery of this crime. That, of course, is partly due to luck. I believe that I can solve that mystery by my methods. I believe that with your methods you will fail. Phelps and I are going to set about trying to find that girl for ourselves, in our own way. If we find her, we will examine her in our own way; and we shan't tell you anything about it until our investigation is complete."

Ashton smiled. "Of course you know," said he, "that you are proposing something that, under my oath of office, I can't permit. If you find that girl—I don't think it very likely that you will, but if you do, I shall be obliged to take her away from you and put her in safe keeping. And the methods I'll use to determine her guilt or innocence will be my methods, and not yours."

**Killer Whale Has No Equal for Ferocity**

The killer whale is the undisputed champion of the sea, declares Mack Sennett, who, as a hobby, has made an exhaustive study of marine life in Lower California seas. "If there is anything that can lick the killer whale, I have never heard of it," Sennett says. "Everything that swims the waters of the earth dreads the terrible killer whale."

"Strictly speaking," the writer explains, "it isn't a fish; it is an air-breathing mammal about 35 feet long. It has huge jaws and heavy fighting teeth. Its head suggests the head of a bulldog, as does its disposition. What makes it more terrible than other big sea monsters is its great speed. Nothing can escape it."

The favorite dish of the killer whale

The doctor laughed. "That's understood," he said. "You're welcome to take her wherever you can find her, in my laboratory, or anywhere else. But if you don't find her—"

"That's thin ice, Doctor McAllister," Ashton interrupted earnestly. "If you proceed with that express determination of yours, I may find it necessary, little as I'd like to, to have you watched, as persons suspected of compounding a felony."

"All right," said the doctor. "That's understood. Watch away all you like. But you'll still let me have a chance at Harvey?"

Ashton shrugged his shoulders with a vexation that was half-genuine, half-simulated. "You don't deserve it," he said, "but I've made a promise and I'll stick to it."

**CHAPTER V**

I fully expected that after the grilling he had received at the hands of the district attorney, Harvey would prove a recalcitrant and reluctant subject for the tests we wished to try upon him. He was nervous, it is true, and it took a good deal of reassuring of the most tactful sort, on Doctor McAllister's part, to get him quieted down into anything like a normal state of mind; but he was perfectly willing.

His first sight of the queer, mysterious-looking instruments which our big room contained did nothing to counteract that fear. To the eye of ignorance it must look like a torture chamber from the inquisition, brought down to date.

My chief spent the better part of an hour taking the young man around and explaining the different instruments to him, and it was not long before young Harvey began to show an inclination to test himself by every electrical and mechanical piece of apparatus in the laboratory. He had forgotten the Oak Ridge mystery, forgotten Ashton, forgotten his recent arrest, forgotten, even, the detective who was waiting in the corridor outside.

He was ready at last for our real experiment. Nothing about Doctor McAllister's manner suggested that there was any difference, from our point of view, between the amusing things we had been doing and the test which he now proposed.

"I'm going to see how quickly you can think," he said. "You're to sit down in this chair, and Mr. Phelps here will read you a list of words. The instant he reads a word, you are to say, aloud, the word it makes you think of—say it just as quickly as you can. You've shown an unusually quick reaction time so far, but this is a better test than any of them. We hang up a pair of little telephones, so—one in front of you and one in front of Mr. Phelps. The moment he speaks a word it makes a little mark on that revolving cylinder. The moment you speak, a second mark is made. The cylinder turns round all the while, and the distance between the two marks shows how quickly or how slowly you think."

I ran my eye down the list which my chief had prepared, with a good deal of care, while we were waiting for them to bring Harvey to the laboratory. The first twelve words were what we call central, that is, they had no connection, so far as we know, with the crime, the mystery or the inquest. In telling us his association with them, which he would probably do freely enough, our subject would establish his normal speed in this sort of mental operation.

But the thirteenth word was Loops and the fourteenth was Pipe. The associations he should announce with those two words and the time he should take in pronouncing them would go far toward establishing a conviction in the doctor's mind and in mine as to whether Harvey had guilty knowledge of the means which had been employed for the old man's murder. If he had such guilty knowledge, if he had seen that ghastly tourniquet made, and twisted it taut himself, or had witnessed the operation, those two simple little words would almost infallibly recall it. The words that would flash into his mind might be violin, perhaps, or throat, or even, possibly, the plain black word murder.

If some such word as that, some damaging, suggestive word, should flash into his mind, one of two things would happen. He would either say it aloud, or he would stop himself from saying it, and deliberately think up another word which, to our ears, could have no sinister significance. But that latter course of action would betray him as certainly as the other, for thought takes time, and the fact that he had been obliged to stop to think would be remorselessly and exactly shown in the chronograph.

(TO BE CONTINUED.)

**POULTRY**

**CHICKS CAN'T LIVE WITH COCCIDIOSIS**

Coccidiosis is one of the most destructive of all young chick diseases, and if the disease has once gained headway in the flock the chicks must die. The disease may be prevented next year by disinfecting the brooder house and rearings the chicks away from the older fowls.

The symptoms of this disease, according to Dr. Leonard W. Goss of the college of veterinary medicine of Ohio State university are loss of appetite; the young birds sit around with drooping wings, eyes closed, and it sometimes may be noted that the droppings are streaked with blood.

"On opening the chicks," the doctor writes, "it is observed that there is considerable inflammation of the intestines, some just back of the gizzard, but the most inflammation is found in the ceca or blind gut. Hemorrhages occur in these parts, and they may be well distended with blood, or in the more advanced stages the blood may be washed out, leaving a cheesy-like mass."

"In this mass are the coccidia which are the cause of the disease and are passed out in the droppings. The best method of curing the disease is to prevent it, so sterilize the brooder house before the chicks are again put into it, using strong concentrated lye, which will dissolve the organisms, and move the house to a clean, fresh sod away from the other fowls."

**Mites Are Different in Habits From Lice**

Mites are entirely different in habits and modes of living than lice, and different methods must be employed to destroy them. Both reduce the vitality of the fowl to such an extent that they easily succumb to disease, writes Michael K. Boyer in the Farm and Ranch.

The louse is a very small insect that cannot suck blood. It lives on the body of the fowl, feeds on filth, dried blood scales from the feathers, and scurf of the skin. It breathes through the pores in the sides of the body.

Lice are killed by suffocation, consequently, insect powder or even dust will destroy them.

The mite belongs to the spider family, and attacks fowls by sucking the blood. The louse does its damage by biting.

Mites have eight legs, lice have six. The former live in cracks and crevices of the building, and visit the fowls only at night.

**Turkeys on Farm Means an Additional Revenue**

Turkeys on every farm will mean additional revenue for the many necessities needed on the farm. An increased production will not lower prices, for during the past three years in all of the large cities campaigns have been put on by the leading produce men urging the consumption of turkeys during the entire winter season and not just a holiday feast. The success of this campaign last season shows that people are anxious to eat turkey any time, for on August 1 there was less than two and one-half million pounds of turkey in storage. Most of this will be consumed before the 1927 crop is sent to market. With the same demands of last season turkeys should bring an exceptionally high market price this fall and winter.

**For Turkey Fattening Ration Use Much Grain**

The North Dakota experiment station gives a good home mixed turkey ration which consists of 100 pounds ground barley, 100 pounds ground oats, 100 pounds ground wheat and 50 pounds of meat scraps. If this ration is kept before the turkeys in a self-feeder at all times with a feeding of grain at night, it will do much toward increasing the returns at market time.

Milk makes a fine food, and if not available, meat scraps, tankage or dried buttermilk are fine protein foods. The animal protein fits in best with other feeds at the rate of 15 per cent to 25 per cent of ground feeds.

**Cull Flock Closely**

Culling the flock closely will not only save feed and labor, but it will also help to remove crowded conditions that often prevail on account of the growing young flock. The disposal of cockerels is often advisable for a similar reason. It is better to keep a small flock of birds that pay their way than to keep a large flock in which there are a lot of drones that eat up the profit made by good birds. Birds that should be culled are sure to show a loss in the future.

**Laying Supplements**

The best supplement to any ration is direct sunlight and green feed, according to tests conducted by the Ohio experiment station. Successful feeding for egg production depended largely upon the use during late fall and winter of alfalfa, clover, soy bean hay and cod liver oil as supplements. Grains and their by-products and packing house by-products do not usually make a complete ration. The legume hays improved the hatchability of eggs.

**The Dairy**

**DAIRY TRADITION RUINED BY FACTS**

Common belief among dairymen that cows freshening in the spring produce milk more economically than cows freshening at other seasons of the year does not check with the facts.

Evidence against this common opinion has come to rural economists at the Ohio State university from the study of records kept for five years by Medina county dairymen.

The economists divided the herds into three groups: Those in which less than 25 per cent of the cows freshened in three spring months—March, April, May—those in which between 25 and 35 per cent of the cows freshened in the spring, and those herds in which more than 35 per cent of the cows freshened in the fall.

Records on these groups showed that costs of feed and labor were reduced in both groups where spring freshening was practiced more extensively.

Milk production per cow increased, however, and cost of producing 100 pounds of milk decreased as the proportion of spring-freshened cows in the herd increased.

Production per cow during the five years averaged 8,154 pounds a year in herds where fall freshening predominated, 7,289 pounds in the half-way group, and 6,822 pounds in the herds where spring freshening predominated. Costs of producing 100 pounds of milk varied accordingly, from \$2.47 in the fall-freshening group to \$2.71 in the spring-freshening group.

**Soy Beans Are Valuable Feed for Dairy Cattle**

Another experiment has been completed where soy-bean meal and soy-bean oil meal has been found satisfactory for feeding dairy cattle. This last experiment has been reported by the Delaware experiment station and substantiates other experimental data on this subject. In this experiment the different forms of soy beans were fed in comparison with peanut oil meal and the results showed that it was superior to this product.

In three experiments conducted by other stations in which soy-bean cake or meal was compared with linseed oil meal, the soy-bean cake or meal was found to be equal in one, and slightly superior in two for milk production. In one experiment where soy-bean cake was compared with cotton-seed cake, soy-bean cake was found to be slightly superior to cotton-seed cake for milk production.

All of these different experiments tend to show the possibilities of furnishing cows with home-grown protein supplements.

**Self-Feeding Dairy Cow Is Found Unprofitable**

What is good economies in feeding beef cattle and hogs is a waste when tried on dairy cows, according to the University of Illinois, which has just reached this conclusion after experiments in allowing dairy cows to "help themselves" to the feeds they want in the quantities they will eat. More feed than necessary was eaten. It was found. No two cows had the same preference for feeds, several different kinds of mill feeds as well as whole grain, ensilage and hay, being used in this experiment. Hence, the cow testing associations have been on the right track in teaching dairy farmers to house their cows in sanitary stalls with ventilation systems, feed and litter carriers, individual drinking cups and special attention to the individual production and demands of the dairy cows.

**Scrub Bull Lowers Herd Record to "Goat" Level**

In many of our dairy herds today culling should begin with the elimination of the sire, says Dr. J. C. McDowell of the bureau of dairy industry, United States Department of Agriculture. Breeding to inferior bulls may pull production down as fast as the culling of low-producing cows builds it up.

Doctor McDowell tells of one herd in which a scrub cow produced 146.8 pounds of butterfat in a year. Her daughter, sired by a scrub bull, produced 126.3 pounds, and the granddaughter, sired by the same scrub bull, produced 99.7 pounds, hardly as much as the world's record for a goat.

The owner finally woke up, sold the scrub bull to the butcher, and purchased a good registered bull.

**Store Surplus Sunshine**

What the irrigation dam is to lands of irregular or insufficient rainfall, the silo is to dairymen. It is, as it were, a reservoir in which the surplus sunshine of summer is stored up for use in winter, or against shortage at any time. In the absence of silos, roots are used to furnish succulence in winter, but the cost of production is greater while the range of profitable use is limited by difficulty of storage and extra labor in preparing the roots for feeding.

**Horticultural News**

**AUTUMN SETTING OF STRAWBERRY**

We have found the soil requirement for strawberries to be one of medium or light texture, and it should be high in fertility before setting, writes Daniel Provant in the Farmer's Guide. A location where surface drainage can be provided is desirable, as it often happens that if the surface water cannot run off promptly that an entire crop may be ruined in a few hours, if a heavy rain that floods the field occurs and the sun shines out soon afterward.

We get equally good results with either autumn or spring setting, but prefer the latter. If autumn setting is practiced the plants should be set sufficiently early so that they will grow fast before winter. A light mulch of straw over the plants the first winter is necessary in very severe temperatures but ordinarily we find that plants survive quite well without it.

When berries are grown for market it is well to use several different varieties so that the marketing season can be prolonged as much as possible. I cannot suggest varieties to suit all soil and climate conditions, as the same varieties which give good success on our soil and climate might not be so satisfactory in another. The best plan for the beginner is to consult with some reliable grower as near home as possible on this subject, and get the plants of him, if they can be obtained. In this way he will get plants adapted to his particular soil and climate.

Where the straw mulch as a winter protection is used, it can at times be made useful in the way of controlling the time of blossoming. If the protection is not put on until after the ground is frozen solid and is left on rather late in the spring, it will hold the frost in the ground and thus delay the blossoms, sometimes holding them off until after the danger of late frosts seems to be past. For the sake of getting some very early berries a part of the early varieties may be uncovered and allowed to progress if the grower feels that he can afford to take a chance. On cold nights it is sometimes advisable to use a smudge fire, which will throw a dense cloud of smoke, thus affording the desired protection.

**Fruit in Baskets Best if Packed With Face Up**

Peaches, apples or pears that are packed in baskets are much more attractive and bring better prices if they are ring-faced, for, when this is properly done, it provides a uniform surface so that each fruit in the face receives part of the pressure of the cover, according to fruit men at the State College of Agriculture at Ithaca, N. Y.

The increased expense of ring-facing baskets is small compared to the increase in market value, they say, because, when fruit is jumble-packed, it seldom carries through to market without some fruits in the face getting crushed or bruised. Blue mold and brown rot soon start to grow when fruit is injured. Even if no mold or rot has started, injured fruit in the face of a basket condemns the package with the prospective buyer.

In facing baskets, the fruit used should be uniform in size and color and should be representative of the contents of the package. Many makes of facers for baskets on the market give good satisfaction. In general they are a good investment, especially in handling large crops.

**Horticulture Notes**

Fruit trees that get no care do not even produce good shade.

As a rule, the nurserymen do not mulch the trees. Cultivation is better.

It is possible to keep trees over winter in the vegetable cellar, but care must be taken to keep them from drying out.

The strawberry is one fruit which should be found in every garden on every farm in the corn belt. It is a universally liked fruit and there are a number of ways of preparing it both in the fresh state and canned and preserved.

The spray machinery should be gone over and carefully inspected. Worn parts should be replaced or at least replacement parts secured. After the sprayer gets into the field it will be too late to order new valve seats, hose, nozzle disks, etc.

The largest peach orchard in this country is that of Bert Johnson in Arkansas, containing between 1,100 and 1,400 acres.

Of all fruits the strawberry is about as easily grown as any and produces within a short time after the planting is made.

Any kind of apple trees from three to four years of age, if they are seedlings, should be grafted; or if they have become three-quarters of an inch in diameter, they should be grafted.