To Fight the Pests

Has To Be Arranged For.

The Mosquito, Flea, Housefly, Cockroaches and Moths, With Which the Housekeeper and Mankind Has to Contend, and How to Devise Means to Overcome Them.

Prof. Henry Skinner recently lectured at the Academy of Natural Sciences in Philadelphia on household pests and insects injurious to vegetation. Prof. found in houses, but only incidentally. Skinner is an entomologist, and spoke | Sometimes it is very destructive-wanespecially of insects which the ordi- tonly so-eating clothes or like articles, nary man comes in contact with most. An abstract follows:

would afford twice that number. Mos- the collection. age water, cesspools and drains. A is so well known.

female mosquito's egg mass will con
The so-called Buffalo moth is not a

both in the larval and perfect state. and wrists and bites very voraciously. est preventives is absolute cleanliness cracks in the floor, housecleaning, and should be plentifully applied to dog or in great numbers.

the little tin tray of a carpet sweeper remedies, that insects are rapid breedand wheel over the carpet, when the ers. fleas are carried in and killed by the kerosene. Or wrap sticky fly paper on the ankles and march up and down the before attaching the fly paper.

The house fly is extremely annoying and very important among household insects, as they settle on all kinds of with bacteria), fly into the house and alight on food, and carry, in all probability, such diseases as yellow fever. cholera, etc. While the common



ing people are like the poor no one to help him down to the life-giving pool before slipped in ahead of him. So many suf if they could only get a little help to overtreme weak-ness they sble to regain their coveted health and

Thousands of

It is just these people that Dr. Pierce's Golden Medical Discovery is designed to aid. It is the strong, helping hand for those who are in the extreme of hodily weakness and nervous exhaustion. It promptly tones, nourishes and builds up the entire system. It gives keen appearance of the strong transfer of the system. the entire system. It gives keen appe-tite, good digestion, pure blood, muscular strength, nerve-force and renewed activity. strength, nerve-force and renewed activity.

"When I first wrote you I was completely discouraged," says Mrs. W. M. Satterly, living at Richford, Tioga Co., N. Y. (P. C. Box 40), in a letter to Dr. Pierce. "I was in pain all the time, could not lie in bed on account of severe, sharp enting pains in my back and right hip. Had pain all through the lower part of my body and my elbows hurt me so much I could scarcely lift my baby. My skin was dry, hersh and scaly and hung like sacks on my arms. My husband called the doctor, and he said it was weakness, and my age. His medicine did me mo good. I kept getting worse and weaker. It seemed I should go crazy. One day I wrote you and received advice. I have taken Dr. Pierce's Colden Medical Discovery, his 'Favorite Prescription' and 'Pleasant Pellets,' and now I can lie in bed with some comfort and can do a good day's work."

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women is Dr. Pierce's Com-mon Sense Medical Adviser. A splendid 1008-page volume with engravings and colored plates. A copy, paper-cov-ered, will be sent to anyone ing 31 one-cent stamps sy cost of customs and

Timely Household Warfare That | species does not bite, an allied species, much resembling it, does, and some-times carries contagious matter and injects it under the skin. Removal of all food or other matter to attract the house fly is one of the best preventives. They may be excluded by screens. Flies undergo their transformations in horse manure, and by destroying it the larvae are destroyed. In the future we will have automobile wagons, trolley cars and fewer horses used in cities, when a house fly will be almost a thing of the past. From egg to perfect state is about ten days. A number of generations thus appear in a single season, which will account for the enormous swarms seen. Another species of fly is

and damaging them so that they are

absolutely worthless.

Gryllus domesticus is the cricket on Insects possess marvelous fecundity, and hence the necessity for repressive of harm to the clothing of the Atmeasures used properly, carefully and lantic coast lifeguard. At Cape May frequently. While we are killing one last summer they were very much anstage the others may be hatching out, noyed with the wanton destructiveso that unless we repeat the remedy ness of the cricket, which will eat alwe may have a new crop that will do most anything in the clothing line. almost as much damage as the previous Another species of cricket is found There are probably 60 different south, very voracious and destructive. Especies that may be included under household insects. They are not all inhabitants of the house, but in one way or another find their way there and therefore interest us. Nothing short of labor and trouble will avail dog fight. Crickets to rid us of them. Any good collection to rid us of them. Any good collection are used for bait for bass fishing; of United States mosquitoes would fishermen have put them into a box number twenty distinct species, this for the next time needed, and on gobeing the number so far described; ing to examine the box there was only though in all probability our country one big cricket left—sole survivor of There was no posquitoes abound in the Arctic regions, sible way of getting out of the box. and are exceedingly annoying to travelers in cold countries, biting there until the last cricket held the field with such severity that people returning from Alaska bear the marks, in ness when found. In Gryllis assimilis, some cases, for several years there- another variety of cricket, the maie's after. All mosquitoes live in stagnant wing covers are rough, and are made water, and commonly undergo their taut and then rubbed together, protransfermations in rain barrels sew- ducing that peculiar singing noise that

tain 500 eggs laid together and floating moth at all. The beetle is less than on the surface of the water, to which one-eighth inch long, dark, with brokthe mass is impervious. The young en white lines on the back. It does hatch out of the egg mass in about six- a great deal of damage in carpets. teen hours. The larvae breathe through Steam may be used, or, if it is not little tubes which they stick up through thought desirable to take up the carthe water, remaining under water for probably a minute. A blacking-box lid containing kerosene and fastened upon over them with a hot iron. This makes the end of a broomstick thrust under hot steam underneath the cloth, and mosquitoes upon wall or ceiling causes the permeates the carpet, destroying the them to drop in and die. The draining eggs and larvae. Another plan is to of all marshy places (where the mosquitoes undergo their transformations) goodly quantity, especially in dark, also destroys them. Another method is putting kerosene on the water, the film under pieces of large furniture, etc. from which not only kills the eggs Perhaps the best remedy of all is benwhen the female deposits the egg mass | zine or naphtha, with which the carpets on the surface of the water, but also may be thoroughly sprinkled, though kills the young larvae. An ounce of benzine is dangerous, as the introduckerosene to fifteen square feet of surtion of a light following its use may

face is a very good proportion. Dragon produce an explosion. flies destroy a great many mosquitoes Attagenus piceus is the little black carpet beetle, not nearly so common in The flea infests the dog and cat, and carpets as the buffalo moth, but somewhen we walk over the floor of an in- times very injurious and requiring the fested house jumps up on our ankles same remedies. The ordinary house moth is the commonest of all the The flea undergoes its transformations little moths, being the progenitor of in various kinds of dust and debris the caterpillar or larvae which feeds from animals, as in rugs or mats that on silk, wool, and other animal fibcats and dogs sleep on. Against all ers. One of the best remedies to keep household insect pests one of the great- this insect in check is to expose articles to the light, also beating. by getting rid of all dust, filling up all which knocks out the eggs and any young larvae. The damage is usually taking up carpets twice a year. A good done under cover of darkness. Reis pryethrum powder, which garding woolens and clothing of furs, these insects are not nearly so likely cat thus infested, wrapping the ani- to deposit eggs where there is an odor in a towel (to exclude the air) for of tar, camphor, naphthaline, carbolic say half an hour; then removing the acid, or anything of that kind; but towel, when the fleas will be found dead after a time where goods of that character are put away, the odor is gradu-Putting meat on fly paper is prac-tically useless. The only fleas caught is likely to be done; the moths fly ally dissipated, and then the damage way are those accidentally around and lay their eggs. It should jumping on it. Put some kerosene in be remembered always in using these

If these poisons are used to protect

room, when the fleas jump up and are in a plentiful supply of naphthaline, paught in great quantities upon the then paste a strip of paper along the In a flea-ridden college the box lid so as to revent access of air. janitor in that way quickly banished the pest—putting on thick rubber boots with vapor so that the insects do not The get air to breathe, and in that case house flea is the species that infests they die or cease to feed; it makes pressed. rats and dogs; although there is an- them very sick. Another method of other species sometimes found on man. protecting goods on a large scale is to use cold storage, a temperature of 20 to 40 degrees Fahrenheit preventing propagation. The tapestry moth refuse matter (which may be loaded feeds on draperies and upholstery of carriages and other heavier goods than our ordinary house moth. It eats into the fabric, if the fabric be thick enough, and forms a burrow there. The white ant is really not an ant. but belongs to the order of neuroptera. and has been known for a long time on account of its very great destructiveness. This species has wingless males, winged males, king and queen, soldiers and workers; comes out in the spring from rotten stumps in enormous flights (being distributed in that way), and seeks another nest; and very often, by watching the place where it comes, a great deal of damage can be prevented. The damage is ital, Tokyo, has a population of a mildone by the male workers. They bur, row into the timbers of various kinds, into logs and underpinnings of dwellings. They are also destructive to ships, and frame buildings have been known to fall down from the ravages of the insects, especially in the tropics. They are also exceedingly destructive in libraries to books and documents. Public documents have been put away umbia. The aggregations of people in in unsafe places, and some years afterwards, when sought, have been found dous. What a field to work in! to have been destroyed entirely by this species. As remedies, all decaying should be destroyed around

> the large jaws are conspicuous, and are used in fighting and tearing one another to pieces, or in protecting the colony against other insects. An insect called plodia interpunctella in the larval condition eats all kinds of stored fruits like dried plums. peaches, prunes, raisins and commodities of that character. It is exceedingly destructive at times, and sometimes infests warehouses where these things are kept. To protect against species of that kind it is necessary to have proper receptacles for the dried fruits, so that the moths cannot get in upon them to lay their eggs. When once infested the pests can be destroyed by bisulphide of carbon, the vapor of the power fell from their hands into the acceptance of the power fell from their hands into the power fell from the

buildings. No old stumps should be

allowed to remain where this species

buildings should be cement or stone,

and all out-of-the-way places that

cannot be examined should either be of

very sound timbers or building ma-

terial of other character should be

used. This species is very destructive

and insidious and gets into places not

likely to be examined. The worker makes all the galleries. All the de-

struction in the wood is brought about

by that form. In the soldier variety

can breed.

The foundations of all

sect life. This liquid soon volatilizes into a gas which is heavier than alr—the liquid being introduced in a tin plate into a fairly air-tight fruit recep-tacle, when the resulting vapor rapidly destroys the larva of this and other insects injurious to fruits and like ar-

Another insect, puralis farinalis, feeds on grain, and is about three-fourths of an inch long. It undergoes its transformation in the various kinds of stored grains, not only the grain itself, but in the various flours and meals, and will feed on stored potatoes and articles of that kind. The usual remedy for all these insects that feed on stored goods and grains is bisul-phide of carbon. They all have similar habits, and this gas or volatilized liquid

is very effective.

The cheesefly that produces the little grub or larva, the cheese-skipper, feeding on cheese and dried beef, is exceedingly small. The only preventa-tive is covering such food material with screens, putting screens in the windows, or keeping such articles in have is screens to keep out the adult fly. Another method of prevention is heating the canned goods or preserves up to a certain temperature, whereby the eggs are destroyed. If the far is opened and only part eaten and the contents left exposed, they soon become infested.

An insect called monomerium pharaonis, one-eighth inch long, is found in sugar, in bread boxes, and around washstands, and is a great annoyance. The best remedy is to find the nest of the ant, capture the queen, and destroy the species in that way; but in case of inability to find the nest and queen, and where the insects are small or infest closets and drawers, the first thing to do is to fill up all the cracks, which may be done with plaster of paris, thus destroying their abiding places. Bisulphide of carbon is also used, being injected into the cracks abiding places should be closed up, and crannies with a syringe. The insects may also be poisoned. A jar of oxide of zinc was kept on a washstand where these little insects crept around in numbers, constituting a great aninto them and being killed when noyance. A little arsenic was mixed caught. A good supply of borax powin with the ointment. They were either being poisoned, and they soon left. in check; but the pest can be entirely mens. Fill small tin pans with water cracks so they have no abiding place.

Future of Asia-Oriental Religions.

sular and peninsular empire has been

much in the order of the world. Ri-

parian and interfluvial kingdom has

not lagged far behind. What means

In our own time Britain unmistakably

illustrates what the physical conforma-

litical energy and progress. And Jap-

an, shaking herself from the slumber

of centuries, sustains about the same

relation to continental Asia that Brit-

ain does to continental Europe. Al-

age, always up to the time, exemplify

ing civil and religious liberty, the Brit-

ish Isles have long been a pattern and

guide to European peoples. To show stable power on the one hand, and free

popular government on the other, is an

object lesson to mankind, a steady

light, a bright pole star in the sky of

human progress. It now appears Jap-

an may yet fill these high functions for

Asia, a model of constitutional gov-

ernment and a sanctuary for the op-

A LARGE POPULATION.

the Northern to the Southern Seas, a

distance of 1,500 miles, and embraces a

about equaling in area England, Scot-land, Ireland and Wales. The popula-

tion is 41,000,000. And other figures are

commensurate. The imports of 1896

were valued at about 120,000,000 of yen,

and the exports at about 170,000,000.

The yen is worth now, say 50 cents.

The annual budget provides for over 250,000,000 yen; the debt is 400,000,000

yen. The army has a peace footing of

000. An expansion scheme for the

the sea. This is not playing at nation-

lion and a half, supplied with over 100

newspapers, and there are other im-

portant cities. Skirting the coast, that

looked forbidding enough, a gentleman

on deck was trying to show his little

girls where their missionary home was. A city, he said, of 70,000, some eight or

ten miles inland. It sounded odd.

thinking of Labrador or British Col-

these old empires are simply stupen-

DIFFERENT BEGINNINGS.

We have spoken of parallelisms with

Britain. The political development,

the changes of dynasty and the forms

of government are not the least inter-

esting. In our empire our islands had

driven to the remoter parts by the free-

dom-loving Saxon, who was in turn

harassed by the Dane and subdued by

the Norman. The conquest between

the Norman kings and their barons,

and the gradual rise of the Saxon com-

monalty give us the long conflict for

parliamentary government and popu-

lar liberty. We had our great famil-

ies among the nobility, the houses of

York and Lancaster claiming the

maker. With us the king and the com-

mons united against the barons, the

mighty lords of the nobility, and gave

us eventually the throne, as we now

have, broad, based upon the popular

tory runs in this regard. The country

has been settled by repeated incursions,

and its aboriginies to this day are

Let us hear how Japanese his-

crown, and our Warwick, the king-

These

their aboriginal races.

will.

The Island Empire Japan stretches

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and set under the respective feet of screened sideboards or closets. After the cabinet. If they actually get into the materials are infested there is little the drawers where the specimens are to be done. Against the larva that in- there is nothing more effective than fests preserves, the only protection we napthaline. Tar camphor balls are also an effectual remedy.

The pavement ant swarms sometimes in enormous numbers. It does not do a great amount of harm, but people want to get rid of them, one method being scalding with boiling water. In-to the burrows of the species have bisulphide of carbon poured, and then fill up the crack, which kills great numbers of them. Pour one-half ounce to an ounce into the hill or cracks or crevices where they are, and immediately cork them up. The black ant is equally common with the little red species, and the remedies are practically the same as those just indicated. To destroy the common cockroach requires absolute cleanliness, entire absence of food material, and the filling up with plaster of paris of all cracks around sinks, floors, loose washboards, or anything of that kind. All their and various poisons are effective after that-chiefly phosphorus paste and preparations containing arsenic. Sometimes traps are use, the insects going der around along the edges of the all killed or else communicated the washboard and all around the floor is fact, one to another, that they were a good method of keeping this species Monomerium pharaonis is very de-structive to museum cabinet speci-scraps to feed on, and by filling up all

> erned from the seventh to the eleventh century, and filled the land with ne-

> potism and family compacts. Then

arose feudalism and overthrew this

is made shogun, or tycoon, under the

Mikado. The Shogunate, under vari-

ous families, forced the Mikado into

ers unearthed the Mikado, abolished

the Shogunate, and with emperor or

king, the Mikado and the people to-

gether again established a good degree

of popular liberty. In 1871 the daimi-

stroyed; and in 1889 the constitution

own, broad-based and constitutional.

It is not to say they have secured al

ment, and are advancing with intelli-

gence, self-reliance, and a noble pur-

pose. There is a very natural sym-

pathy, and there may well be a very

close alliance between the Britain of

LITTLE REAL RELIGION.

Looking at what we find in Japan

and China, we do them no injustice to

say in their early historic eras they

had little deserving the name of reli-

gion at all; and that even yet they are

philosophical systems. Japan, coming

out of her mytho ogical period about 461

Even earlier, a, the beginning of the

from

A. D., had Shin o as her national cult.

China had be in coming in with Chi-

nese literature, philosophy, medicine

art and laws. In the sixth century of

gether, which are by no means antag-

onistic or exclusive one of the other,

of this interesting people. Shinto fav-

ored nature worship, taught the divine

origin of the imperial family, and went

a long way towards deifying the em-

peror. "Obey the mikado and follow

your own heart," is Shintoism. This

the heart is impure and that the ills

and self-discipline. The contribution of

the sovereign, the father, the husband,

the elder brother and the friend-by

the friend meaning an inhabitant of

the same country. One can readily see

from this statement how mikado or

emperor worship and the worship of

ancestors are the Jachin and Boaz of

the Japanese temple. These are the

great conservative forces of these an-

cient empires. We should hardly call

their system a religion: but inasmuch

as they have priests and temples and

bring their offerings it carries that

guise. Shinto gives them all the theol-

ogy they have; Buddhism their plan

of salvation and future estate, and

Confucianism their morality. Differ-

ing one from another and having

differences, still in many cases all three find adherents and disciples in

the same persons. This is a cathol-

icity even beyond our ordinary Chris-

venerable and cherished faiths through

which Christianity with her doctrines

of the one Supreme God, of the crea-

tion, sin and redemption of man, of

the inspiration and infallibility of her

books, of spiritual regeneration and

the resurrection of the dead, and of

future eternal existence, rewards and

punishments, must work her way to

the hearts of the people, to the genius

of institutions, to the character of

society and the life of the nation. Sure

human wisdom and strength; here is

tianity. And this is the network of

minor sects with their contentions and

we get the moral and religious fabric

Christian era Confucianism

living largely on ethical, political and

that Britons have achieved, but they

The Methodist Superintendent Writes family government, and two great clans

of the Island Empire He Is Going and houses, Taira and Minamoto,

to Visit-Its Probable Place in the struggle for supremacy for 200 years.

The Minamotos prevail, and their chief

Canadian Pacific Railway Co.'s R. M. seclusion and ruled till the middle of

S. Empress of Japan, mid-ocean.-In- our own century. Then the king-mak-

this parade of words? Simply that the ates were abolished and feudalism de-

seat of national power is on the sea, was promulgated, the people given a

or on the great river. Tyre was an voice in the management of affairs,

ancient example, and Greece and Rome. and the monarchy established like our

tion of the earth has to do with po- have tasted liberty and good govern-

ways stimulating manufactures and the Orient and the Occident, the Japan

yen. The army has a peace footing of doctrine of loyalty to the emperor 145,000 men, and a war footing of 520.- Buddhism intensified; but insisted that

navy is putting mighty armaments on of life are to be corrected by knowledge

keeping and empire-building. Its cap- Confucianism was the supremacy of

trade, according to the measure of the of the West and the East.

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along the eastern coast of Asia from our era Buddhism from India through Corea made its way into Japan and ov-Brass Founders and Finishers. ershadowed Shinto for more than a territory of say 150,000 square miles, thousand years. Laying the three to-

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