package containing more than a certain amount must be accompanied by a customs permit or certificate from the local farmer, and heavy penalties are appointed for breach of these regulations or infringement of the privileges of the farmers. The effect of the decree is to establish a monopoly in the trade in opium in the government, which will work through the licensed farmers. But no provision is made for the sale by public auction of the right to deal in opium, as is usual in British and other colonies where opium is farmed.

— We learn from *The Critic* that a periodical of a somewhat new character is to appear in The Hague (Netherlands). It will be a fortnightly in four languages, — English, French, Spanish, and Italian, — containing original correspondence on letters, arts, and science from London, Paris, Madrid, and Naples. A New York correspondent has been invited to contribute an American letter to the quartet already named. The object is to promote the study of languages. The editor of the new periodical is to be M. Taco H. deBeer, editor of *de Portefeuille*, the *Dutch Art Chronicle*, and *Literary Review*.

— A new process of electroplating natural objects, such as animals, flowers, and tissues, has been brought out in France, and, as described in *Engineering*, is as follows: An albuminous liquid is obtained by washing some slugs or snails in water to clean them, then placing them in distilled water until they give off their albuminous matter. This is filtered and boiled for an hour, then distilled water is added to make up for that lost by boiling, and also about 3 per cent of nitrate of silver. This solution is then kept in bottles hermetically sealed, and in a dark place. When required for use, about 30 grams of the liquid are mixed with about 100 grams of distilled water, and into this solution the objects to be electroplated are immersed for a few moments. They are then put into a bath consisting of about 20 per cent of nitrate of silver dissolved in distilled water, and afterwards submitted to the action of sulphuretted-hydrogen gas, which reduces the nitrate of silver on the albumen-coated object. Thus treated, an organic object becomes fitted to receive the electro-deposited metal intended for it; and the layer is said to be of superior fineness to that produced by the other known processes for coating natural objects with metal by galvanoplasty. It shows the texture of the object with much delicacy.

— Improvements have been made at the glacial pot-hole on Colonel Hackley's land in Archbald Borough, Lackawanna Co., Penn. Mr. Hackley has generously appropriated the sum of five hundred dollars for the purpose of protecting it against the action of the weather, and also to make it more attractive to visitors. All the underbrush has been cleared and the ground graded, leaving the shade-trees standing, forming a little park. At present the pot-hole is divided in two by a wooden brattice for the purpose of mine-ventilation. All this timber-work will be taken out, so that the entire pot-hole can be seen.

— Reports of two journeys through Yemen have recently been published, — one of a German scientist, E. Glaser, who visited the country for the purpose of collecting Sabian inscriptions and manuscripts, in which he was eminently successful; one by the English major-general, F. T. Haig. The latter made only a flying trip through the country, starting from Hodeida on the western coast, to Sanaa, the capital, a distance of 140 miles, and from Sanaa turning due south to Aden, 260 miles. Including a week spent in Sanaa, the journey occupied, in all, thirty-one days. The object of the journey was to ascertain whether it might be possible to do any thing for the Christianization of the inhabitants. Glaser, on the other hand, staid in southern Arabia from October, 1882, to March, 1884, and from May, 1885, to February, 1886; and at the present time he is again at work in his old field. It is somewhat amusing to compare the statements of both travellers. Haig describes the severity of the Turkish taxation, and their cruelty against the natives. Glaser, on the other hand, praises the safety of the territories occupied by the Turks, and states that the English have no control whatever over the tribes inhabiting the colony of Aden, who receive an annuity amounting in the aggregate to twelve thousand dollars a year. During the last fifteen years the Turks have succeeded in establishing their authority in several parts of Arabia, but it is only in Sanaa that the influence extends into the interior. According to Haig's description, they cannot feel very safe here: "The town has an Arab population intensely hating the few thousand Turks by whom it is held down, heavily taxed, and generally obliged to furnish gratis the supplies required for the large garrison of Turkish soldiers. The latter are not allowed to go into the narrow streets for fear of assassination. There is a citadel at one part of the walls, with its guns turned significantly, not to the outside, but upon the town. Glaser staid most of his time in Sanaa, and made numerous excursions in the neighborhood. He made astronomical observations and surveys in addition to his important archæological collections. The following notes are taken from his description in the Proceedings of the Geographical Society of Vienna. The west side of Arabia is occupied by a mountain-range from eight thousand to ten thousand feet in height. The western declivity of this range is very steep, falling abruptly to the Tihâma, a plain about two thousand feet in height, with a gradual slope towards the sea. The eastern slope of the mountain-range is very gradual. The south coast of Arabia is also occupied by high mountains. While the high land between these ranges is a desert, the slopes are drained by numerous rivers, some of which are running throughout the year. The slopes of the mountains are highly cultivated, terraces being built from the summit of the range to its foot. Those which can be easily irrigated yield four crops annually, and are highly prized. Coffee is one of the principal products of this country. While Haig describes the climate of the high parts as wholesome and agreeable, it is quite the reverse according to Glaser. He says that malarial fevers prevail in the high land as well as in the low land. In Sanaa the temperature frequently falls below the freezing-point, and during the hottest season a temperature of 92° F. was observed. In winter the daily variations are very great, a temperature of 32° in the morning being followed by one of 68° after noon. The western slopes of the mountains are moistened by heavy fogs which every day ascend from the low land to the summit, though they do not extend into the interior of the country.

LETTERS TO THE EDITOR.

*** The attention of scientific men is called to the advantages of the correspondence columns of* SCIENCE *for placing promptly on record brief preliminary notices of their investigations. Twenty copies of the number containing his communication will be furnished free to any correspondent on request.*

The editor will be glad to publish any queries consonant with the character of the journal.

Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.

The Scientific Swindler Again.

A MAN answering the description of the impostor given in previous numbers of *Science*, appeared at the rooms of the Boston Society of Natural History on Saturday last, having in his possession a microscope, which he offered for sale at a very low price. We suspected his character, but, having no charge against him, were unable to do any thing, and were in hopes he would return on Monday with his microscope, as he engaged to do. He did not return, and we could therefore do nothing. ALPHEUS HYATT.

Boston, Oct. 18.

Savagery in Boyhood.

EVERY thing, we suppose, must be considered hereditary in the present age; even the tendency to wear cocked hats, or to throw cabbage-heads on hallow eve. At any rate, the *Popular Science Monthly* for October brings this doctrine to bear upon the phenomena of savagery in boyhood, as noticed in *Science* of Oct. 7. The author explains that cruelty in children is the transmitted habit of ancestral savages, and observes that "the emotion of pity appeared late in the history of the race." In the same connection we may mention the intense interest which children take in narratives of warfare: torturing animals is a less general incident. But the callousness of children in contemplating the horrors of war and its consequences has always been an interesting fact to us. However, is no other analysis of this possible than the supposition that our savage forefathers were cruel? May we not be in danger of making

too much of heredity here? No doubt its importance cannot be exaggerated. But if, as the author admits, "the early appearance of the sympathies depends upon an early development of mental functions which are properly dormant until later in life," may not the cruelty of children be an incident of ignorance, and not due to the entire absence of pity? As admitted, pity is a state of mind which belongs to the reflective stage of consciousness, when we are able to compare ourselves with others, and, in however indistinct a form, to apply the method of doing as we would be done by. It is quite possible that children know nothing about the pain they inflict by cruelty and torture. They may be governed in their conduct by much the same curiosity that prevails to permit vivisection, and most probably never inflict pain for the sake of creating suffering. Blind Tom, when a boy, used to pinch and torment his brothers and sisters until they cried, and all for the sake of the pleasure he himself received from a new and peculiar kind of sound, his mind being interested in all sounds alike, and passing no intellectual or moral judgments upon their occurrence. It is no doubt much the same with most children until their experience enables them to realize a 'solidarity' of interests between themselves and others. Then they will begin to show sympathy and to shrink from producing pain, not because it is hereditary, but because social environment exerts such a pressure in favor of learning the consequences and moral significance of our actions. At the same time heredity cannot be ignored. But the phenomena of cruelty and pity are much more complex than heredity, while including it. Besides, it may be misleading to say that "the emotion of pity appeared late in the history of the race;" for it may not have been so much the sympathies that appeared late as the extent of their application. So of the individual. Pity may be instinctive, but the complicated range of circumstances which require its exercise may demand more knowledge and experience than are possible to childhood. Indeed, children may very early begin to cry from sympathy at the spectacle of suffering in others, when conscious of it, but are indifferent to its infliction upon animals, most probably because they do not realize any thing about it. Pity will show itself, then, in proportion to the extension of their knowledge of what is reciprocal to their own interests or sense of pain. Hence may we not say of sympathy, both in the race and in the individual, what T. H. Green said of humanity in comparing Greek and modern civilization; namely, that the standard of conduct in this respect was the same to the Greek as to us, but that more persons are to-day included in the right to be judged by it? That is, "the conviction of the brotherhood of all men does not bring a new conception of what is due towards those who have claims upon us, but a new view of the range of persons who have such claims." Certainly it seems a little violent to suppose the absence of sympathy altogether because the extensive conditions under which it is exercised at present were wanting in the earlier history of the race or of the individual.

J. H. H.

The Purslane-Worm (Copidryas Gloveri Grote).

DURING the past season the entire State of Kansas has suffered an invasion of caterpillars of a species not previously known to exist except upon the plains of Colorado, New Mexico, Arizona, and western Texas. This insect has occurred in such numbers as to suggest to many of our citizens the idea of spontaneous generation, and the writer has received many inquiries indicating alarm lest it should prove to be a new edition of the real 'army-worm,' and become a great crop-destroyer in the year 1888. Such fears, however, are entirely groundless. I have not been able to make the caterpillars eat any thing but purslane; and the insect may be regarded as a friend rather than a foe, since its chief mission in life appears to be the destruction of one of our most troublesome weeds.

The eastward progress of this species reminds one of the similar advance of the Colorado potato-beetle. My first acquaintance with it was made in August, 1884, at Deming, New Mex., nearly twelve hundred miles from Lawrence, where I captured some twenty of the moths during my summer collecting-expedition. They were attracted by the lamps at the station-hotel of the Atchison, Topeka, and Santa Fé Railroad Company. They proved to be a rare species in collections, and were in great demand among my entomological correspondents. My next acquaintance with this insect was from two specimens of the moth captured at the electric lights in Emporia, Kan., by my student-friend and assistant, Mr. V. L. Kellogg. Professor Popenoe of Manhattan observed the caterpillars and bred the moth in 1886. Emporia and Manhattan are each about a hundred miles west from Lawrence, and the first observed appearance of the species at the latter place was in 1887. It remains to be seen whether the purslane-destroyer will become acclimated in a moister and colder climate than that of its original habitat. If it succeeds in adapting itself to its new environment, it may push on to the Atlantic seaboard, and delight the farmers and gardeners of the whole country by assisting to exterminate the hated 'pursley.' If not, it will disappear from view, as did a certain New Mexico butterfly (*Colias Mexicana*), which appeared suddenly in Kansas in large numbers in November, 1875, and has not since been observed in the State, having been unable to survive the first winter. Inasmuch as this latter immigrant has already survived one Kansas winter in safety, it is probable that it will become a permanent resident.

I would offer the following explanation of the fact that this insect, indigenous to the Far-Western plains, should so long have delayed its invasion of Kansas and its possible 'march to the sea.' Its native food-plant being a Western species of purslane (*Portulaca retusa* Engelmann), it did not extend beyond its original habitat until the building of the Atchison, Topeka, and Santa Fé Railroad had resulted in the western extension of our common Eastern purslane (*P. oleracea* L.). As soon as the Eastern purslane reached the home of the Far-Western species, forming a sufficiently continuous connection, the purslane caterpillar, finding the two plants equally palatable, began its eastward march. In precisely the same way the Colorado potato-beetle, having for its original food-plant a wild Western species of *Solanum* (*S. rostratum*), began its journey to the Atlantic just as soon as the cultivated potato (*Solanum tuberosum*) was extended westward to meet the wild *Solanum*, commonly called the Texas thistle and Santa Fé burr.

To the entomologist it will be interesting to know that the scientific name of the purslane moth is *Copidryas Gloveri*. It was described by A. R. Grote in 1868 as belonging to the genus *Euscirrhopterus*, but at a later date it was placed by him in the new genus *Copidryas*. Mr. Herman Strecker has referred it to the genus *Eudryas*, but the peculiarities of the caterpillar, hitherto unknown, confirm the propriety of separating it from that genus. It belongs to the family *Zygænidæ*, and is a near relative of the 'beautiful wood-nymph' (*Eudryas grata*) and the 'eight-spotted forester' (*Alypia octomaculata*). As both the latter species feed upon the foliage of the grape-vine, it would not surprise me to find the purslane-worm occasionally making use of the same food-plant. I do not, however, apprehend any serious danger of making such a discovery.

F. H. SNOW.

University of Kansas,
Lawrence, Kan., Oct. 10.

Queries.

15. IS THE TRUMPET-CREEPER POISONOUS? — I should be very glad to hear of any positive evidence in regard to the alleged poisonous property of the trumpet-creeper (*Tecoma radicans*). This beautiful vine is very abundant in this neighborhood, and there seems to be a pretty general belief that it is poisonous to the touch, the effect being like that of the poisonous *Rhus*. I have not, however, been able to get hold of any well-authenticated cases of poisoning from this plant. A child of my acquaintance was said to have been poisoned from handling it, but it is not at all certain that the eruption was not a return of a slight cutaneous affection from which the child had suffered shortly before. Such cases as this prove nothing, nor, on the other hand, does the fact that I, and others, have handled the plant with impunity. Our immunity may have been due to our individual constitutions. Every one knows, of course, that there are plenty of people who are not at all susceptible to *Rhus*-poisoning, and yet no one would hesitate to call either species of *Rhus* a very poisonous plant. As far as I can learn, the poisonous property of the trumpet-creeper is not generally recognized by botanists. I shall be very glad to hear what the experience of other people has been with this plant.

JOHN MURDOCH.

Smithsonian Institution, Oct. 12.