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## DERMATITIS VENENATA—A SUPPLEMENTAL LIST.

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I DESIRE to place upon record in a collected form for convenient reference a list of the agents which have been observed to produce inflammation of the skin by contact since the publication of my work on Dermatitis Venenata in 1887. Some of them have been already described by me from time to time, of which I will make no farther mention here than to append the date and place of publication:<sup>1</sup>

Among the substances which remain to be more particularly spoken of, there are a few the irritative properties of which have become more or less well recognized, others which are not generally known to be "poisonous," and those which may be best put upon the suspected list until additional data concerning their action upon the skin have been obtained.

### A—IRRITANTS GENERALLY RECOGNIZED.

But few words may be said with regard to the irritative properties of the members of this class, as attention has already been called to them by reliable observers.<sup>2</sup> It includes the following:

<sup>1</sup> *Primula Obconica*: *Garden and Forest*, Feb. 20, 1889; *Boston Med. and Surg. Journal*, May 1, 1890.

*Buxus sempervirens*: *Boston Med. and Surg. Journal*, Dec. 12, 1889.

"Violet Water": *Boston Med. and Surg. Journal*, Dec. 12, 1889.

Chlorine Gas: *Boston Med. and Surg. Journal*, Dec. 12, 1889.

*Pastinaca sativa*: *Boston Med. and Surg. Journal*, Jan. 28, 1897.

*Hamamelis Virginiana*: *Boston Med. and Surg. Journal*, Jan. 28, 1897.

*Ostrya Virginica*: *Boston Med. and Surg. Journal*, Jan. 28, 1897.

*Oleum Cassiæ*: *Boston Med. and Surg. Journal*, Jan. 28, 1897.

"Aniline Black": *Boston Med. and Surg. Journal*, Jan. 28, 1897.

Caterpillar of Brown-tail Moth: *Boston Med. and Surg. Journal*, June 13, 1901.

Poisoning by Fur-dye: *Boston Med. and Surg. Journal*, March 6, 1902.

X-Rays: *Boston Med. and Surg. Journal*, Dec. 3, 1896.

<sup>2</sup> Wolters. *Dermat. Zeitschr.*, Bd. IX, Heft. 5.

Cathelineau. *Annal. de Derm. et Syph.*, Tome IX, p. 63.

Brocq. *Bulletin Medical*, 1898, p. 237.

Certain new hair-dyes—

1. Chlorhydrate de paraphenylene-diamine.
2. Aureole, containing metol, amidophenol-chlorhydrate and monoamidophenylamin.

Several instances of severe dermatitis by the above agents have been recorded within the last few years.

The first named is a crystalline substance, soluble in water, alcohol and ether, and is transformed by oxidizing agents into quinone. It is the basis of several commercial pigments. It is sold in solution under various names as a hair-dye with an accompanying bottle of "oxygenated water." Used one after the other upon the hair, a violet black is immediately produced. The inflammation occasionally excited spreads from the seat of application, the scalp, beard, eyebrows or moustache, to neighboring surfaces, sometimes widely, and may assume any grade of dermatitis with much œdema and itching. The eyelids are greatly swollen, and conjunctivitis occurs. The attack lasts from a few days to weeks. The dermatitis may not be produced until several applications have been made.

The second, the so-called "aureole," is also sold in solution with a companion bottle of peroxide of hydrogen. The hair is first to be washed with a solution of soda or soap, and then the contents of both bottles are to be mixed and applied to the hair, which in a few hours assumes a dark-brown color, that may be made darker by repeated applications. In the cases of ensuing dermatitis recorded by Wolters, itching and burning began in a few hours, soon followed by small vesicles and pustules. The inflammation extended over the general surface, and was followed in the fourth week by a universal outbreak of urticaria of a fortnight's duration. Dr. A. D. Mewborn, of New York, gives a full and excellent account (*Journ. Amer. Med. Asso.*, May 18, 1901) of the action of this substance upon the hair and skin, with a complete bibliography of the observations recorded by French physicians.

I have seen two instances of such dermatitis, and cases have been recorded by Elliot and Morrow (*Proceedings of New York Derm. Soc.*, March 25, 1902).

#### PHENYL HYDRAZIN HYDROCHLORIDE.

Hall describes<sup>3</sup> the case of a chemist who was repeatedly attacked by extensive eczematous dermatitis whenever he conducted experiments upon this substance. On one occasion when spilled upon the hand the

<sup>3</sup> *British Journ. of Derm.*, March 1, 1899.

attack developed primarily upon this spot, but slight exposure to its vapor would often produce widespread inflammation.

#### ORTHOFORM.

In orthoform we have a valuable analgesic, claimed at first to be innocuous when applied to the skin or mucous membrane. A more extended observation of its action in cutaneous applications has shown, unfortunately, that it is capable in some persons of provoking very serious forms of dermatitis. The most common type of inflammation is an erythema with œdema suggesting erysipelas, rarely advancing to vesicle and bulla formation. Occasionally signs of constitutional disturbance are observed, rise of temperature, headache and nausea. Dubreuilh<sup>4</sup> mentions cases in which gangrenous ulcers resulted from its application. Its poisonous action may follow its application in any form, either upon the sound or denuded skin. I have found it less mischievous than iodoform.

#### SALOL.

Thibierge describes<sup>5</sup> the irritative action of salol powder upon the skin, when used as a surgical dressing, as similar to that of iodoform, the efflorescence varying in intensity from erythema to bullæ. The same effects may be produced when applied as an ointment. When used as a dentifrice it may excite great inflammation of the lips within and without, which extends to the surrounding skin, and may last indefinitely as long as it is thus employed.

#### RESORCIN.

This substance produces dermatitis not infrequently when used in any form upon the general surface or scalp. It simulates erythematous eczema in type. Patients should be always directed to use it cautiously at first, and the writer, when prescribing it as a salve for the scalp at bedtime, advises that a nightcap be worn.

In this category may be placed *aristol*, *ichthyol*, *dermatol* and *europhen*, all of which are capable of exciting dermatitis when applied to the skin of some persons.

#### PYOCTANIN.

This substance, which has been recommended by Hyde as a local treatment in lupus erythematosus, has in one instance in my experience excited an erythematous dermatitis, which extended considerably beyond the area of application.

<sup>4</sup> *La Presse Médicale*, Number 40, 1901.

<sup>5</sup> *La Pratique Dermatologique*.



## CREOLIN.

I find the following excerpt in relation to its actions upon the skin: "Quite a number of cases, according to the *Therapeutic Gazette*, have recently been reported in which more or less unfavorable results have followed the employment of creolin, in the majority of cases the effects being attributable to the phenic acid and its derivatives in this proprietary remedy. In the *Gazette Médicale de Paris*, No. 29, 1890, a report is published of a case observed by M. Borehmeyer of a child, two and one-half years of age, whose finger was crushed between cog-wheels, by which a severely contused wound was produced, which was treated by applications of a one and a half per cent. solution of creolin. On the fourth day the finger was covered with vesicles, both small and large, which ruptured spontaneously, giving issue to a yellowish liquid. The eruption soon disappeared from the injured hand, and, on the removal of the application, a cure was rapidly produced, though the eruption again returned on renewed applications of creolin. So also Dr. Wackez publishes an account of seventeen different surgical cases treated by creolin. In ten of these, union by first intention occurred; in seven the creolin produced eczema, erythema, and vesicular eruptions, and desquamation of the skin in large patches; at the same time the patients had more or less severe constitutional disturbance, and an examination of urine showed that these poisonous effects were attributable to the presence of phenol. It would seem, however, that children are especially susceptible to the deleterious effects of phenol and its derivatives, and hence are more readily influenced by creolin."

## IODVASOGEN.

This lately introduced substance has been recommended as incapable of producing any of the ordinary ill-results of iodine compounds, but the following case, reported by Dr. Lipman-Wulf, of Berlin,<sup>6</sup> shows its dangerous character. After its inunction over a bubo for nine days an erythematous inflammation of the overlying skin suddenly arose, terminating in desquamation. A few days afterwards the penis and scrotum became œdematous, and a diffused papular efflorescence appeared upon the abdomen and breast, the papules becoming confluent and forming large, irregular blotches. On the fourth day the upper and lower limbs also exhibited a scarlatina-form inflammation, and finally the face and ears became œdematous. All these changes in the skin slowly disappeared. The subjective symp-

<sup>6</sup> *Dermat. Zeitschr.*, Bd. VI, p. 499.

toms consisted of intolerable itching and general lassitude. Traces of iodine were recognizable in the urine for some time after.

#### KEROSENE.

In my book on *Dermatitis Venenata*, I speak of the treatment of lice of the head and pubes by the free and prolonged application of petroleum, and state that I have never seen any irritative action produced by it. The same good character cannot be given to kerosene, so often used for a similar purpose; for I have several times seen an inflammation of the scalp and surrounding areas excited by it in such cases, and similar results, a diffused fine papular dermatitis, follow its domestic use as an embrocation in rheumatism, sprains, etc. General anæsthesia has been occasionally produced by its application upon the scalp.

#### ELECTRICITY.

I have seen an eruption follow within a few minutes the passage of an electrode from a static machine up and down the arm some three inches from the surface. The skin became thickly covered with erythematous macules the size of a pea at the points of spark contact. Some of the lesions developed into true wheals. The same results followed a second trial a week subsequently.

With regard to the dermatitis produced by the X-rays, briefly mentioned in my report of an early case (see reference above), no farther mention is here needed, as the literature upon the subject is now so extensive. Cases will become more rare as experience with the agent increases.

#### B—IRRITANTS NOT GENERALLY RECOGNIZED.

The list of substances which have been known to set up a dermatitis only occasionally, or which are not recognized as possessing such properties, is of considerable size, and is continually increasing as the innumerable novel products of the synthetical chemist come to be introduced into therapeutics, and our knowledge of the properties of plants extends.

Brief mention will be made of the following:

#### “AURANTIA”: HEXA-NITRO-PHENYL-AMIN.

This is an orange-colored dye, used to stain leather yellow. According to Crocker<sup>7</sup> it excites a severe dermatitis of vesicular type upon the hands of workmen who use it for staining purposes.

<sup>7</sup> Crocker, text-book, late edition.

## COCUS WOOD: GREEN EBONY.

Crocker states in his recent edition that flute-makers who use this wood are liable to eczematous dermatitis. In one of his cases the eruption began two hours after sawing the wood into blocks. Two workmen were simultaneously affected. Crocker says this tree belongs to the *Euphorbiaceæ*, a family of ill-repute, but the Century dictionary states that it is the *Brya* or *Amerimnum Ebenus*, a small, leguminous tree of Jamaica.

I may add that I have treated several furniture-makers for similar inflammation of the hands, who say it is produced by working upon a so-called mahogany, a red, coarse-grained wood, the botanical relations of which I have not been able to determine. In all instances they have brought me the same wood as the cause of their condition. They call it "redwood." It may well be this *cocus* wood.

And here reference may be made to the very frequent occurrence of dermatitis of the hands, often of severe type, among furniture-polishers. It is impossible to determine the nature of the exciting agents, so complex is the composition of the polishing and staining fluids used by them.

## GUIACUM: LIGNUM VITÆ.

I have met with one case of severe dermatitis produced by applying a mixture of tincture of guiacum and vinegar to the leg. The latter alone could scarcely have excited so much inflammation.

## HUMULUS.

The hop belongs to a dangerous family, the *Urticaceæ*. I have not met with a case of disturbance of the skin produced by it, but I have an anonymous reference to one where erythema and swelling of the face and neck were produced by exposure to the vapors of a hop fomentation, and Piffard<sup>8</sup> ascribes to it the power of exciting an erythematous eruption with scattered pustules. Several large brewers inform me that they have never observed any form of irritation produced by hops in their workmen.

## HERACLEUM GIGANTEUM. ANGELICA ARCHANGELICA.

I find a record of dermatitis produced by these umbelliferous plants in the Transactions of the Dermatological Society of Great Britain and Ireland.<sup>9</sup> In my book I mention the irritative properties of *Heracleum lanatum*, the only native representative of this extensive

<sup>8</sup> Piffard. *Materia Medica and Therapeutics of the Skin*.

<sup>9</sup> *British Journal of Dermatology*, Vol. IX, pp. 285, 287.

genus. Dr. Stowers reports the case of a gardener, whose arms and hands were inflamed by the young shoots of the cow parsnip, *H. giganteum* or *villosum*, much cultivated on account of its great size, ten or twelve feet high.

At the same meeting Dr. Walsh showed a confectioner, whose arms and hands became "red, rough and blistered" the next day after gathering *angelica* for preserving as a sweetmeat. A friend, who assisted him, was affected in the same way. You are all familiar with this European plant as a confection, so named for its supposed medicinal virtues. We have sixteen species in North America, but I have no knowledge of their possessing irritative properties.

#### HYACINTH.

Notice was called to the irritation caused by handling hyacinth bulbs by Mr. Freeman, of London, in 1896. Later, Professor Henslow, at a meeting of the Royal Horticultural Society, and Dr. Morris, before the Linnæan Society, brought forward additional evidence. They both attributed this action upon the hands of gardeners to the abundant presence of minute needle-shaped crystals of oxalate of lime adhering to the scales of the bulbs. The dermatitis occurs upon the hands and arms; also upon the face by immediate contact with the hands, no doubt. Associated with these *raphides* great numbers of mites are found between the scales, *Rhizoglyphus echinopus*, which Mr. Freeman<sup>10</sup> regards as the cause of the inflammation. Both the common and the Roman hyacinths are capable of producing this irritation, but upon some persons only. I find but few bulb florists susceptible, on inquiry.

#### COTONEASTER MICROPHYLLA.

H. D. Cooper (London *Lancet*, June 7, 1902) describes an acute dermatitis, which was produced on the hands, arms and face of three gardeners who had been engaged in cutting and binding this climbing plant. The eruption consisted of papules and oozing areas. It belongs to the Rosaceæ, and is highly ornamental. The leaves are pubescent and the poisonous principle may lie in the hairs.

#### HUMEA ELEGANS. COMPOSITÆ.

A handsome bush, often cultivated in hot-houses. Dr. Hearnden describes<sup>11</sup> the case of a lady who presented an eczematous dermatitis of the face caused by rubbing the fragrant blossoms upon her veil. Rubbing them upon his own arm, a fine papular efflorescence was excited of brief duration.

<sup>10</sup> *British Journ. of Derm.*, Vol. IX, p. 66.

<sup>11</sup> *London Lancet*, July 26, 1902.



## THE GINKGO TREE, SALISBURIA ADIANTIFOLIA.

Late in November, 1901, I received from the botanist of the "Poisonous Plant Investigations Department," U. S. Department of Agriculture, a communication concerning a severe case of dermatitis from the fruit of the ginkgo tree. The main facts are given as stated by Mr. Chestnut:

"Ginkgo fruit was collected to the extent of about a third of a bushel by one of the scientists of our department, and these were allowed to stand in a basket outside the window for four days. On the evening of the fourth day Mrs. M., the man's wife, washed them with tepid water in a basin, the operation lasting about an hour. The fruit is naturally ill-smelling, but this lot seemed particularly so. Mrs. M. had previously pulped small quantities of the fruit for the nuts, which she roasted and gave to the children to eat. Even while washing in this instance she noticed a slight itching of the arms, which were laid bare up to the elbow. The patient was awakened shortly after midnight with intense itching, and the arm soon began to swell. A day or so later the face also began to itch and swell, until finally she was unable to see. At about this point the case was called to my attention. I found no mention of dermatitis from ginkgo described in your book or any of the literature. I suggested the use of an alcoholic solution of lead acetate, which gave great relief. Thinking, however, that you might know of a specific antidote, I wired to you. When your message was received the patient's arms were still slightly swollen. Your remedy was applied at once and I now have the satisfaction of telling you that it was attended with very satisfactory results. I have not heard from the case for a couple of days, but it was progressing very well on Saturday. There can be no doubt that this was a genuine case of poisoning from ginkgo fruit, for there was no poison ivy growing around the house, nor had any member of the household been out in the woods in contact with it. The stove-wood was entirely free from any pieces of poison oak.

"I was glad to learn that the ginkgo tree is beginning to fruit this year for the first time in the botanical garden at Cambridge. Our trees at the Department have not been fruiting well except for the last four or five years.

"I have spent some time in looking up the literature relative to the analysis of the bulb, and have found but few references. Schwartzenback describes a peculiar acid which he called ginkgoic acid, on page 424 of Volume VI., *Viertelz. prakt. Pharm.*, and Chevreul and Cloez have determined the butyric acid. I have not been able to obtain this



reference. Wittstein, in his *Handwörterbuch der Pharmakognosie des Pflanzenreichs*, states, on page 268, that the flesh also contains gum, sugar, tannin, citronic acid, pectin and chlorophyll. He also suggests that the ginkgoic acid may be an impure acetic acid. It would be very interesting to determine the active constituent, but I do not feel that I have time to make the investigation at present. The desirability for doing so is, however, emphasized by another case of poisoning which happened about two weeks ago at this Department. The eruption in this second case was precisely similar to that of the first, so that now the question of uncommon idiosyncrasy has been effaced."

This tree is an interesting member of the *Conifera*, with striking deciduous, palmate or fan-shaped leaves. It is a native of Northern China. Although there are several examples of considerable age and size in and around Boston, I have never seen it in fruit, nor was I aware of the properties established by the observations above recorded.

#### C—SUSPECTED PLANTS.

##### TECOMA RADICANS, TRUMPET VINE.

Many harmless vines or creepers are looked upon with suspicion on the supposition that they may possess poisonous qualities, or may be the poison ivy, *Rhus toxicodendron*. Among them are *Tecoma* and species of *Ampelopsis*.

A few years ago several articles appeared in botanical journals with regard to the alleged poisonous properties of the trumpet-creepers, a very common vine in the Southern and Southwestern States. Mr. Murdoch, U. S. Dept. of Agriculture, and other botanists of the South, were of the opinion that the vine is perfectly innocent. Although I am aware that a similar prejudice against it exists in the New England States also, where it is extensively cultivated about houses, I have never been able to obtain reliable evidence of its possessing any irritative properties.

##### AMPELOPSIS.

In the AMER. JOURNAL OF CUTANEOUS DISEASES, April, 1895, our esteemed colleague, Dr. Grindon, of St. Louis, published a communication under the title, "May *Ampelopsis quinquefolia* Give Rise to a Dermatitis?" A young lady, it is stated, "broke out abundantly on hands and face with water-blisters similar to those caused by *Rhus toxicodendron*." She had been handling the stems of the Virginia creeper, and the condition of the skin was attributed to this. The evi-

dence is not absolute here, because it is admitted that poison ivy grew within a half-mile of the house.

It is, of course, possible that any plant may be innocuous to the million and yet poisonous to an individual, but evidence must be absolute, both positive and negative, before accepting it as convincing.

I may relate in this connection a case in point: A young lady from the country, accompanied by her mother, consulted me on account of a severe acute dermatitis of the hands and face, closely resembling *Rhus* poisoning. On inquiry she stated that she had not been out of the home yard for a week previously to the appearance of the eruption, and that the only vine in the yard was a wood vine (*Ampelopsis quinquefolia*) growing over the front porch. I asked her to bring me a specimen of it. They came again in a few days with some of its foliage. It was *Rhus toxicodendron*. On so informing them, the mother exclaimed: "There, that man did it." It seems a boarder, who had paid suit in vain to the daughter, asked permission on leaving to set out a vine as a remembrance of happy hours spent in the front porch. He selected *R. toxicodendron*, perhaps to symbolize the burning nature of his passion.

You all know how often these creepers are mistaken for each other, especially in autumn, when their foliage takes on the most brilliant colors of all vines. If one would only remember that three leaflets mean possible danger, and that five mean safety, such cases would not occur. For myself, I still regard *A. quinquefolia* innocent.

#### OTHER FORMS OF AMPELOPSIS.

In the London *Lancet*,<sup>12</sup> under the title "Eczema Caused by Virginia Creeper," Drs. Burd and Palm report cases of acute dermatitis developing after handling the leaves of a vine called *Ampelopsis Hoggii*. I need not say that this plant is not the Virginia creeper. It is a large-headed variety of *A. Veitchii*, not commonly cultivated with us, where the so-called "Boston vine," *A. Veitchii*, grows so luxuriantly. I have known no instance of poisoning by it. This is, as you know, a Japanese plant, and in this connection I quote from the letter of a botanist<sup>13</sup> traveling in England. It may afford a solution of the English cases above referred to:

"Another very different species of *Rhus* is passing as *Ampelopsis japonica*, but its trifoliate leaves, rooting stems and milky juice at

<sup>12</sup> *London Lancet*, Jan. 3 and 17, 1891.

<sup>13</sup> Jack in *Garden and Forest*.

once indicate that it is a *Rhus* very closely allied to, if not identical with, our poison ivy (*R. toxicodendron*). This so-named *A. japonica* has been distributed as a novelty by a well-known English firm, and in Germany I found it planted as something choice to form a covering for the supports and sides of a much-used arbor."—*Country Life*.

I may cite in this connection another case in my own experience: I was asked one autumn by a physician to see a boy with a severe dermatitis. I gave the diagnosis—*Rhus* poisoning. The reply was that the boy had not been out of the city for two weeks. On inquiry it was admitted that he had been playing in a churchyard where the Boston vine grew, and had picked some of the brilliant leaves. I visited the spot and found a vine of *Rhus toxicodendron* growing amidst those of *Ampelopsis Veitchii*; and its foliage outshone those of the latter in beauty.

These instances explain, I think, how innocent plants may get a bad reputation.

While preparing this paper, I thought to write to Dr. Chesnut, of the Poisonous Plant Investigations Bureau, to inquire what plants not included in my published lists he might have knowledge of, and he kindly sends the following reply:

"It is, of course, extremely difficult to get up a complete list of plants which have been known to cause dermatitis, but I think that I can add a few to your published list and to those enumerated in your letter. You may possibly have referred to some of these in your book, but I could not find them indexed under their scientific names.

"The common radish sometimes causes very painful swelling of the hands and arms when they are picked in considerable quantity in the morning before the dew has been dissipated. The common dogwood, *Cornus florida*, is accused, especially in New England, of causing a dermatitis when the flowers are gathered. This is likewise true of *Kalmia angustifolia*, and there is one case of skin poisoning which was traced to *Monotropa uniflora*. The commercial pawpaw, *Carica papaya*, causes severe dermatitis on the hands of persons who handle the green fruit in making pickles of it. I have one case of poisoning against one of the California century plants. A correspondent writes that in beating the leaves to get at the fiber his whole arm, which was exposed to the juice, was badly poisoned. A common Western weed known as dog-fennel, *Anthemis cotula*, very frequently causes a slight dermatitis in the case of children who strike one another with the green plant. Flowers of the common field daisy, *Chrysanthemum leucanthemum*, are sometimes poisonous to children. A few cases of



poisoning from handling the star cucumber, *Sicyos angulatus*, have been reported.

"Besides these plants, there are a few which cause a dermatitis, although, perhaps, indirectly, the real cause being possibly the fungi which grow upon them. I refer especially to several species of *Hypericum*, and to the buckwheat *Fagopyrum fagopyrum*. The chronic diseases caused by these plants are essentially cases of skin poisoning. Closely allied with these are the various *molds* which directly cause dermatitis. An interesting paper on this subject was published by Dr. A. W. Brayton, in the *Indiana Medical Journal*, Vol. XVIII., pp. 403—413, 1900."

"My experience with the species of *Laportea*<sup>14</sup> is as follows: On March 20th a gardener at the Washington Botanical Gardens pointed out two of the young plants, some four or five inches high, which were being cultivated under glass. He informed me that before he knew what it was he touched the plant, and was so badly poisoned by it that he could hardly sleep for over a week. Having heard of the very marked effect of the *Laportea*s, I touched the stem of one of the leaves with my thumb, using but very little pressure. The effect was immediate and very severe. It was almost indescribable, but the tip of the thumb felt very much as though it had been touched with a red-hot iron. The pain extended clear up to the arm within a very few minutes, and was sufficiently painful to almost make me shudder. The pain was very severe from 2 p. m. until 11 p. m., and was felt less severely the next morning. After that the pain rapidly ceased, but was acute for at least a week whenever the thumb was wet or even moistened with water, and afterward until the first of May sharp pains would occur in the thumb whenever it was pressed heavily against an object on the point of contact with the plant. In spite of this effect there was absolutely no mark on the thumb showing where the glandular hairs had entered it.

"The plant was not in flower when I last saw it. I have not looked thoroughly through the literature for the effects of *Laportea*, but I find that several species are mentioned as being extremely poisonous to the touch. Very fortunately, however, the genus is pretty closely confined to the tropics."

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<sup>14</sup> Mr. Chesnut has just identified this plant as *Laportea peltata*, Gandich, of the Malayan peninsula.—J. C. W.



## DISCUSSION.

Dr. P. A. MORROW was sorry that Dr. White had not taken the time to give the full history of his case of poisoning from the use of paraphenylene diamin. He had seen two such cases, produced from the use of the French preparation known as "la Royale" hair dye and the dermatitis it gave rise to was very obstinate and showed a great tendency to invade surfaces which had apparently not been touched by the preparation itself. It had what we might term "invading tendencies" which were very characteristic. He knew of no other artificial eruption that was more intense and persistent, or more difficult to cure.

It was no easy matter to discuss other parts of Dr. White's paper, with the unpronounceable names it contained. The only thing he wished to say was that a great many innocent plants received a bad reputation for toxic effects simply from clinical misinterpretation. Dr. White might remember that some three or four years ago the speaker had sent him a shrub or plant which was thought to have been responsible for the occurrence of a very intense dermatitis in a member of his family. No poison-ivy could be found in the vicinity where the shrub had been gathered and, although he knew that the person affected was very susceptible to ivy poisoning, he thought that element had been absolutely eliminated. A subsequent examination revealed the fact that some ivy grew in the clefts of the bark of an adjacent tree. If he had not taken the precaution of sending this shrub to Dr. White he would have concluded that he had discovered in this entirely harmless plant the cause of an intense dermatitis.

Mr. V. K. CHESNUT, of the U. S. Department of Agriculture (by invitation.): It was his duty, in connection with work in the U. S. Department of Agriculture, to investigate all cases of poisoning from plants that might be called to his attention. In this way the Department obtained accounts of a great many cases. The most common causes of skin poisoning from plants were the poison ivy and the sumac; these, as we knew, were very widely distributed in this country, the latter even being cultivated for ornamental purposes. In the case of most of the plants mentioned by Dr. White, the evidence of their toxic properties was very good indeed. The fact that radishes poisoned some people would not be generally accepted, but he had sufficient evidence now to confirm his opinion that persons who handle a quantity of radish leaves are apt to be poisoned by them.

The evidence that the fruit of the ginkgo tree is poisonous was to him conclusive. He saw two instances of this, one in 1901, and another the following year. In both cases, a large quantity of the fruit was handled. Poison ivy would undoubtedly prove poisonous to a great many persons who might claim to be immune from its effects, provided a considerable quantity of the toxic oil or the juice was applied to the person's skin. This was also true with many other plants.

Dr. PARDEE wished to add the name of the "Early Everlasting," as

it was commonly known, to the list of flowers that might possibly be the source of a dermatitis. It was a small white flower, found in the spring of the year. He had seen it produce a mild dermatitis of the face, lasting perhaps twenty-four hours.

Dr. MORROW had often observed that poison ivy was peculiarly prone to affect blondes rather than brunettes. He had known brunettes who could handle the vine with impunity, while blondes, as a rule, were severely affected from the slightest exposure—even from proximity to the plant without actual contact.

Dr. STELWAGON said that he had observed at least half a dozen instances of a dermatitis of the hands and sometimes of the face, produced by the use of *Metol*. This drug metol was used by photographers in the development of negatives.

Dr. SHEPHERD wished to speak of a case of *rhhus* poisoning seen last autumn. The patient was a physician's daughter, who suffered from a very severe attack of *rhhus* poisoning. She recovered from this, and the following spring had a recurrence. Investigation showed that the dress which she had worn at the time of the first attack had been put away and not worn again until the following spring, and the wearing of this dress was followed by a recurrence of the dermatitis.

Dr. GEORGE T. JACKSON had observed that the application of epicarin might set up a dermatitis like that produced by sulphur. In one instance where it was prescribed in ten per cent. strength for a blonde patient, it produced a very intense dermatitis. He was led to use it because it was represented as not irritating.

Dr. CHARLES J. WHITE observed a patient in the Massachusetts General Hospital who painted himself with epicarin and set up an eruption resembling that produced by chrysarobin. He had in mind another patient, a woman, whose skin was so delicate that any plant or sticky pollen would poison her. In her case, the list of toxic plants would be a very long one.

Dr. GILCHRIST had seen very many cases of dermatitis from poison oak and ivy, but he had never seen the palms of the hands involved. Sections from cases of *rhhus* poisoning showed the vesicle very superficially situated.

Among the toxic chemical substances, boracic acid might be included. In that connection he recalled the case of a woman who suffered from an eczematous eruption on the face and neck. After diligent inquiry he learned that she was in the habit of keeping her bowels open by using an injection composed of a dram of boracic acid to a quart of water. Upon stopping these injections the eruption disappeared. In the course of a month she returned with a similar eruption, which had appeared after a single rectal injection of a quart of water containing a dram of boracic acid. The eruption again disappeared, but it recurred after the use of the same injection. It was apparently distinctly associated with the absorption of the boracic acid.

Dr. H. G. KLOTZ wished to confirm what Dr. Gilchrist had said about the use of boracic acid. He formerly used it quite freely in bladder troubles, and upon several occasions its use was followed, in the course of a week or so, by an eczematous eruption on the forearms and on different parts of the body. He had no doubt that it was due to the boracic acid and it was on that account that he gave up using it in those cases.

Dr. STELWAGON: The cases just referred to by a number of the speakers were not examples of dermatitis venenata, but of dermatitis medicamentosa; in the latter the disturbance was due to drug absorption or ingestion, and not to the local external irritant action which characterized dermatitis venenata.

Dr. JAMES C. WHITE wished to ask whether anyone present had ever seen an example of ivy poisoning in a Negro? He thought there was no doubt that blondes were more susceptible to the action of poison ivy than brunettes.

In connection with Dr. Gilchrist's remarks he would say that a rhus dermatitis might occur on the palms. He had had it affect his own palms, although the lesions were not as prominent there as in other regions.

He was not willing to accept Dr. Shepherd's explanation of the recurrent dermatitis in the case he reported. While it was a popular belief that ivy poisoning might recur spontaneously a year after the primary attack, he did not regard that theory as at all plausible; there were no grounds for it. On the other hand the skin of a person who has once been poisoned by ivy was no doubt more susceptible, and with the onset of the warm weather, eczematous lesions or other forms of dermatitis might occur. The idea that the poison of rhus should stay in the system for a year and then manifest itself was absurd.

Dr. L. DUNCAN BULKLEY: Regarding the case of recurrent ivy poisoning mentioned by Dr. Shepherd, said that he had seen a similar occurrence. The case was one of general dermatitis from poison ivy, and several months later, when the man again put on the shirt which he had worn at the time of the primary attack, the eruption recurred. He thought there was no doubt that the poison of the ivy might be retained in the clothing. He had seen this dermatitis occur in the winter, the source of the infection having been the dried ivy vine contained in Christmas greens.

Dr. JAMES C. WHITE (closing the discussion) did not think Dr. Bulkley had proven the fact that the poison of ivy may be retained for any length of time in the clothing. Such cases required very careful investigation. It was well known that the poison of the ivy vine was quite evanescent. Herbarium specimens of *R. Toxicodendron* and *venenata* do not produce dermatitis. In many instances he had tried to inoculate persons who were known to be extremely susceptible to the poison directly from the lesions of another person, and had never been able to produce the slightest dermatitis in that way.