

# HANDBOOK OF TROPICAL DERMATOLOGY AND MEDICAL MYCOLOGY

edited by

**R. D. G. PH. SIMONS**

*Assistant*

Senior Lecturer at the Dermatological Clinic  
of the University of Leyden

Dermatologist in Charge at the  
Oudekerk Hospital, Amsterdam

VOLUME II



1 9 5 3

**ELSEVIER PUBLISHING COMPANY**  
AMSTERDAM HOUSTON NEW YORK LONDON

## JUNGLE DERMATITIS

(Dermatoses caused by tropical plants and woods)\*

R. D. G. PH. SIMONS

Amsterdam

A number of substances have become notorious in the tropics. We mentioned a few of these in passing when dealing with eczema, dermatitis forestières and lucites, because light is an important factor in the genesis of certain allergic eczemas. A clear distinction should be made between *dermatitis forestières* and *phyto-photo-dermatoses* as was already explained in Chapter 1 (p. 66-70 and 90-100).

The undermentioned substances (for convenience's sake arranged alphabetically) should still be mentioned in this connection.

*Agave* (one of the Narcissus group) is the American aloe or century plant which is said to flower once in a hundred years. It grows also in the tropics. *Agave dermatitis*" resembles more or less the—better known—"ragweed dermatitis".

*Anacardiaceae* These, together with the *euphorbiaceae*, are surely the most notorious plants. *Poison ivy* (*Rhus toxicodendron*) is the best known representative of this group. In the tropics, however, *poison sumac* (*Rhus vernicifera*, which is used in the manufacture of Japanese lacquer), *Jamaica* or *coral sumac* (*Rhus metopion*) and *cashew nut* (*Anacardium occidentale*) play a greater part. *Rhus vernicifera*, which contains urushiol, may cause urticaria and eczema in persons working with Japanese lacquer. *Jamaica sumac*, also called mountain manchineel (see *euphorbiaceae*) contains the irritant named cardol.

The cashew nut is called, in Indonesia, *kating mangst* is a peanut. The sap, both of the leaves, of the bark and of the fruit, contains

anacardol and may set up bullous dermatitis. The nut itself which is eaten as an accompaniment to the apéritif is harmless. It is important to know that the sap of the cashew nut turns black when exposed to the air for which reason it is sometimes used as marking ink, when textiles so marked may set up anacardol dermatitis. The same applies to the marking ink nut (*Semecarpus anacardium*)

A well-known plant in the tropics is the *manga* i.e. *Magnifera indica*. Peeling the fruit with the teeth or sucking up the flesh of the fruit previously beaten to a jelly through a hole in the rind, might set up circumoral dermatitis. Cheiropompholyx, too is frequently blamed on to manga-eating this opinion, however is probably incorrect. It is more likely that cheiropompholyx, which both in the tropics and in Europe, is more or less a seasonal disease, occurs predominantly during that part of the year when the manga fruit ripens. (See also reughas)

*Ananas* (Pineapple) Genuine pineapple eczema is rare, and, in fact, far from well-known. What is called "*pineapple estate pyosis*" is probably caused by an acarus, as, for instance, is also the case with *capra itrb*

*Bamboo* SCHIFFR has reported a vesicular dermatitis resulting in pigmentation in a bamboo sander (*Arch Derm and Syph* 1951). Sometimes the condition is not due to the bamboo itself but to fungi living on the bamboo, i.e. the *Arundaria alpina* (BEQUAERT—Central Africa) BENZEL (*Arch Dermat and Syph* 1951) described dermatitis from bamboo rackets (varnish?) Most cases of bamboo dermatitis should in fact be attributed to the varnish if not to insects

*Banana dermatitis* from the banana fruit (*Musa sapientum*) is extremely rare, and when it is suspected to be present one should still think of other agents. According to SCHWARTZ, TULIPAN and PECK the pulp and rind contain different sensitizing agents. They draw attention to the fact that insecticides on the banana tree may account for so-called banana-dermatitis

*Batata-tich* is usually due to the batata louse. In Surinam, the "*patatta louse*" i.e. the larva of *Trombiculum flui* and *T vanommereni* is found in the grass. Together with *T helleri* (absent, or very rare, in Surinam) it belongs to the *T batatas* group (LINNAEUS) i.e. *T flui*. BRUNST distinguishes between *Leptus batatas* the "bête rouge" of

the Antilles and *T. flui* and *T. vanommereni*. The batata louse is also found on chickens and lizards. It is open to question whether it infests precisely (and exclusively) the batata plant, a supposition which, indeed, was contradicted by BONNE, VAN THIEL and VAN OUDEREN on the other hand, found the *T. flui* in the so-called "garter plants" (leguminous *Vigna sinensis*) these authors assume that the name "batata louse" derives from the fact that the insect for preference attacks whites (whose nickname is "pataten")

*Bay-rum* is an alcoholic perfume distilled from the leaves of *Amomis caryophyllata*, and widely used in South America. Its counterparts are eau de Cologne and Cajeput oil (Far East) mentioned below. It may cause dermatitis and breloque dermatitis.

*Betel nut* The *betel nut* is used in Indonesia for sarih-chewing, which stains the mouth red. It is said that the nut and the leaves of the betel-pinang or *Areca catechu* palm have a refreshing effect and cause a slight "nitritoid" complexion. This habit may eventually cause oral carcinoma.

*Cajput oil* is very popular in SOUTH ASIA since it is used for massage, thus often causing dermatitis and/or folliculitis. Cajeput oil originates from the eucalyptus tree and is also used as a perfume in ointments, just like wintergreen oil (See obat matjam.)

*Cassia indica* or *henna* Henna is known as a hair dye. The majority of hair-dye eczemas, however, are not due to henna but to other substances. It is even worth considering whether in such cases, it would not be better to use henna in future as it relatively rarely causes eczema. (See also bay rum.)

*Chrysanthemums* Of the different species of chrysanthemums, pyrethrum is the best known. It is dealt with in more detail under the insecticides.

*Cinnamon* Cinnamon dermatitis following direct contact with cinnamon as well as pruritus following ingestion of cinnamon has very rarely been reported. LEFFER (*Arch Derm and Syph* 1951) reported a case due to toothpaste, although the tongue and lips were not affected. He compared this case with JADASSOHN'S case of iodoform dermatitis by the application of vaginal tampons by which the vulva was not affected.

*Citrus* The active component in the bark, limonene, is a terpene. The peel contains citral, geraniol, etc. which may both cause eczema and photosensitize the skin. (Circumoral pigmentation may result from peeling the citrus fruit with the teeth.) *Citronella*, which is applied to the skin to ward off mosquitoes, may also set up eczema. To this group also belongs *bergamot oil*, a component of eau de Cologne and other lotions. Bergamot oil may have a strongly photosensitizing action on the skin, for which reason one should be seriously advised against cooling the face by dabbing it with eau de Cologne. Figure 96 in Volume I shows a bullous dermatitis above the pigmented streak, caused by an experimental bergamot oil dermatitis. Hair lotion containing bergamot oil may cause pigmented streaks in the neck, sharply delimited against the edge of the blouse or collar. Figure 91 in Volume I shows a hair lotion dermatitis of the hand of a woman who had washed her hair. As can be plainly seen, the skin under the finger ring which had got wet but was protected against the sun's rays remained unchanged. Histological examination showed that the corneal layer was dark in colour but no increased pigmentation could be found.

Of the different species of citrus fruit the grape fruit is also and particularly the cause of dermatitis and discoloration. We once had, in a P O W camp an "epidemic" of a capricious looking pigmentation of the abdominal skin in a number of prisoners of war. It turned out that this was caused by the men tearing the fruit open above their naked belly (they wore very few clothes) and letting the sap from the peel flow and spatter abundantly over the skin. (See SALES and ALDICK's articles on this subject in the *Arch Derm and Syph* 1941 and *Der Hautarzt* 1952.)

*Caoutchouc* Dermatitis from natural or synthetic India rubber is almost always due to the accelerators used for vulcanization, the most notorious being mercapto-benzothiazole. (See latex.)

*Copra itch* As already mentioned in Chapter 1 copra itch is not, in fact, an allergic eczema, but is caused by Tyroglyphi and similar acarids. Figs. 52 and 53 in Volume I.

*Cotton seed dermatitis* also called SCHRAMBERG'S disease, is a similar zoonosis as copra-itch. (See Chapter 1 (zoonoses).)

*DDT* (dichlorodiphenyltrichlorethane) which is widely used on

the plantations causes relatively little dermatitis and even then one should inquire whether the dermatitis was not, in effect, caused by the substance mixed with the DDT

*Djatti* (from the wood of *Tecona grandis*) This is dealt with under teak wood.

*Euphorbiaceae* To this group belong, among others, *Hippomane manchinella* or *bringamosa* (meaning quarrelsome woman") of the Antilles the *arbre aveuglant* (*Excoecaria agallocha*) the *castor oil plant* (*Ricinus communis*) and the *poison tree* (in Surinam, possentree) or *Hura crepitans*. The sawdust of these trees is sufficient to cause an allergic eczema. How strong the stimulating action of the sap is, may be clear from the name "arbre aveuglant" (= blinding tree) As regards the ricinus seeds we were told that they were used by exiled criminals in French Guiana for the purpose of provoking dermatitis, so as to get exemption from hard labour. The poison tree, which contains hurne is supposed to be able to cause a dermatitis resembling erysipelas.

*Figs* The sap of the *Ficus carica* plant may set up eczema and blisters and also sensitize the skin to light, thus causing a "pigmentation" of long duration. Packers of preserved figs may reveal dermatitis due to the juice as well as dermatitis from the preserving material.

*Grasses* may irritate the skin and may cause pruritus and eczema or pyoderma. This is usually due to stinging hairs, as is the case with the *Melinis minutiflora* and *Andropogon rufus*. Many cases of grass dermatitis however are actually caused by chiggers.

*Insecticides* The majority of the large number of existing insecticides consist of a mixture of different substances nearly all of which may themselves, act as a stimulus and set up an allergic dermatitis.

*Derris* (powder from the root of *Derris elliptica*) and *pyrethrum* are sprinkled about or burned as incense (*obat nyamak*)

The *derris* only rarely provokes an allergic eczema. In a number of workers in a *derris* factory however we found, in addition to laryngitis caused by inhaling *derris* powder also eczema of the scrotum. Most probably this was caused by *derris* powder adhering to the men's trousers. A number of men, moreover, had conjunctivitis. In ordinary daily life *i.e.* outside the factories, *derris* eczema practically never occurs. To the *derris* group (*i.e.* the *Lonchocarpus*, one of the Papil-

lionaceae) belongs also the *mikan-* or *cube-root* which is used in South America as fish-poison. Its active components are rotenone and "derris ether-extract" each of which is also used separately as an insecticide.

Of *pyrethrum* the best known are *Chrysanthemum pyrethrum* and *Pyrethrum cinerariifolium*. Of these two it is the flowers that are most generally used this in contrast to the pyrethrum listed in the *Pharmacopoeia*, which is made from the roots of *Anacyclus pyrethrum*. Mixed with citronella, cajeput oil, paraffin oil, arsenic, naphthalene, etc., the various insecticides are put on the market under different names. All these remedies must satisfy at least five conditions (1) they must kill insects, (2) they must not cause any stains (3) they must not have a bad smell, (4) they must not provoke eczema in either man or animals, and (5) they must not be inflammable.

*Jute dermatitis* and folliculitis due to several species of the *Corchorus* plant occur when the material is prepared with potassium hydroxide and oils and dyed. The jute dust may cause bronchitis.

*Kajaputb oil* - see Cajeput oil.

*Katjang or Dam Gattal* This plant, the "itch bean" or "itch leaf" is *Mucuna pruriens* ("cow-itch") It is one of the *Fabaceae*.

*Lapacho wood* or *Tecoma avellanedae* may cause eczema and blisters, as has been reported by CORDERO and LYNCH in the *Praxis med. Argentina* of 1951

*Latex* In the P O W camps in the midst of the rubber woods, the substance used to stick everything together was latex, the milky viscous fluid tapped from rubber trees. It was used especially as adhesive to attach gauze to the skin for the protection and treatment of wounds and ulcers. Out of thousands of cases thus treated we never once saw a single one of dermatitis, although the latex might occasionally cause slight folliculitis or a little erythema when pulled away from the skin. In Mexico the so-called *gusquile dermatitis* is attributed to the latex of *Parthenium argentatum*.

*Lemons* See Citrus.

*Mahogany* The beautiful wood of this representative of the *Melastomaceae* contains chloroxytonine which in some cases may provoke eczema. The fresh wood may colour the skin a reddish brown.

*Mango*. See *Anacardiaceae*

*Obat Matjam* the famous "tiger balsam" the panacea of South-East Asia, probably contains cajeput oil, camphor and wintergreen oil (*salicylus methylicus*) In a certain number of cases it provokes dermatitis

*Oranges* See citrus.

*Orchids* See vanilla.

*Parsnips* After my statements in Volume I page 92 that the parsnip (*pastinaca*) does not grow wild in Indonesia and that there, instead of the Umbelliferae, especially the Rutaceae including the citrus, may cause a meadow-dermatitis (*dermatitis pratensis*) BELISARIO has reported parsnip dermatitis in the *Australian Journal of Dermatology* of 1952. The condition was seen in a group of men who had peeled parsnips being at the same time exposed to sunlight. The lesions were suggestive of mustard gas contamination and even of self-induced lesions. CHALMERS and PEKKOLA have described a Rutaceae-dermatitis in the Sudan, due to *Halophyllum tuberculatum* and which was accompanied by facial oedema. (See also footnote page 94)

*Pineapple itch or pineapple estate pyosis* See *Ananas*

*Ragweed* (*Ambrosia artemisifolia* or—*elatior*) is a common field weed with lobed leaves. Its pollen and plant juice are said to cause dermatitis.

*Renghas* *Glutz renghas* is one of the *Anacardiaceae* referred to above. The dermatitis it causes may be so serious that it is sometimes called *renghas pemphigus* in Indonesia. Fig. 50 in Volume I

*Rottan* "Rottan dermatitis" revealing wheals, papules and a kind of prurigo nodularis is not, as a rule, caused by the rottan but either by the varnish or by the rottan mite. In most cases the latter turns out to be the common bed bug, which scampers into the smallest hiding places. One should therefore not give immediate credence to a patient's statement that there are no bed bugs in his rottan chair! (Fig. 54 and 53 in Volume I)

In a large number of cases, the bed bugs hide in the cane chairs: the moment one rises they speedily retire again.

*Rubber* Eczema, either local or widespread, due to vulcanized rubber or to elastic (garters, artificial teeth, etc.) is relatively frequent (see also under latex and caoutchouc). *Leukoderma* from contact with



rubber has been reported by OLIVER *et al* (*J.A.M.A.*, 1939) and SPENCER, DOWNING, and others (*Arch Derm and Syph.*, 1948 1952)

*Sadd or Sett dermatitis* is a papular eruption due to contact with the panicum pyramidale plant in the river Nile.

*Sisal dermatitis* is usually due to the lactic acid or other sensitizing agents of the juice.

*Soaps* Since residents of the tropics go in for much washing and bathing every soap manufacturer tries to put a product on the market which is still more "medical" than that of his competitors, the chief means to this end being the addition of carbolic acid, sulphur, coal tar, etc. The majority of these "medicaments" have little value. A number of them provoke eczema, to cure which the patient then bathes with still greater zeal—using the medical soap. In investigating soap-allergy one should especially bear in mind what SULZBERGER and BEAR write in FISHBEIN'S "Medical Uses of Soap" "The demonstration of true allergic sensitivity to an ingredient of a soap is rendered difficult if not impossible by the fact that the application of soap solutions in skin tests invariably includes not only the application of the potential allergenic ingredients, but also applications of dissociated alkali and acid as well"

*Sugar* On the sugar plantations themselves there is practically no sugarcane eczema but in the sugar mills scaly and tyloitic eczema of the palms, sometimes coupled with hyperkeratosis of the nails is often found in women whose work it is to scrape the centrifuges, and who use large quantities of water. What is called "*sugar furunculosis*" and tendosynovitis falls outside the scope of the present chapter.

*Tobacco* In common with the tomato and the potato the tobacco plant belongs to the Solanaceae. Tobacco eczema is not, as a rule, caused by the leaves, but by preservatives, insecticides or "flavours" such as vanilla. Cigarette smoker's pharyngitis should, perhaps, be attributed to the glycerine with which the cigarettes are treated, rather than to the tobacco.

*Tea* It is probable that "*tea dermatosis*" is no more an allergic eczema than is copra itch, but an epizoonosis caused by the bite of *Rhizoglyphus parasiticus*.

*Teakwood* Two species of which is djattu (Indonesia) and iroko (African teakwood) may in some cases provoke an allergic eczema.

This eczema is sometimes difficult to recognize as such, because the processing of older wood may also cause eczema.

*Vanilla dermatitis* usually occurs through the juice of the pods, when not from scari or from the alcohol and cashew nut s cardol, which may be used to preserve the pods. *Vanilla plantifolia* is the most common vanilla of the orchidaceae.

"*Vesicant insects*" are numerous in tropical forests. Most notorious are the coleopterae and lepidopterae. The cantharides of the meloides group and the staphylinidae (amongst which the dangerous *paederus*) belong to the coleopterae. Except urticaria some of these insects may cause convulsions vomiting and dyspnoea.

The browntail *Euproctus crysothoes* moth may cause moth dermatitis by its hairs. VINCENTE reported moth dermatitis in Venezuela from a hylesia moth belonging to the family Saturniidae (*Acta Cientif Venez* 1952). See Chapters 34 to 40.

#### REFERENCES (not mentioned in the text)

- BLOCH B *Arch Dermat and Syph* (1920).  
 BLOCH B *Congres Int Copenhagen*, (1930).  
 DOWNING, J G., *Arch Dermat and Syph.*, 66/3 (1952) 401  
 EPSTEIN S and MACVILAY S L. *Annals of Allergy* (1948).  
 OLIVER E. A., SCHWARTZ, L. and WARREN, L. H., *J.A.M.A.*, 113 (1939) 927  
 HILL, L W and SULZBERGER, V B., *Arch. Dermat and Syph* (1935).  
 SIMONS, R. D G PH., *Dermatologie der Tropen*, Amsterdam, (1950).  
 SCHWARTZ, L., *Tullipan L and Peck S V Occupat diseases of the skin*, Philadelphia, (1948).  
 SPENCER G A *Arch Dermat and Syph.*, 58 (1948) 215.  
 URBACH E. *Allergy* London, (1944)  
 URBACH E., *Skin disease: nutrition and metabolism* New York (1946)