

sarcoma of the neck and pharynx, treated with living cultures of streptococcus of erysipelas, for four months, during which time one severe attack of erysipelas occurred, was in good health 6 years after treatment. The tumor in the pharynx did not entirely disappear, but the malignancy was evidently destroyed. Five patients were well from 6 years to 8 years after treatment. Of these, 3 were afflicted with inoperable spindle-celled sarcoma, one with round-celled sarcoma, and one with epithelioma. In all of these cases the diagnosis was confirmed by the microscopic examination of well-known pathologists. The history of one of the patients is of the greatest interest. The original growth, a very extensive infiltrating, spindle-celled sarcoma of the chest wall, entirely disappeared under four months' treatment with the toxins in 1894. After remaining well for 6 years, a similar growth has recently developed on the opposite side in a corresponding locality. The patient is again under the toxin treatment and is showing improvement.

Fifteen of the 21 cases remained well for a period of from 3 years to 7 years and 6 months. Of these, there was recurrence in 2 after 3 and 6 years respectively, 1 dying of metastases in the abdomen, the other being the case referred to as now under treatment.

The cases were all hopelessly inoperable, and the diagnosis was confirmed by the microscope except in two cases. In these two instances the history of the cases with the clinical appearances made the diagnosis of sarcoma unquestionable. The type of tumor in the 15 cases that passed the 3-year limit was as follows:

Spindle-celled sarcoma	8
Round-celled sarcoma	2
Mixed-celled sarcoma	2
Epithelioma	1
Clinical diagnosis only	2

It is worthy of special note that 2 of the successful cases now well, 3 years and 9 months and 4 years and 3 months respectively, were sarcoma of the parotid gland. Butlin, in his last edition of "Operative Treatment of the Parotid Gland," states that, "up to the present time there are very few instances of cure by operation of undoubtedly malignant disease of the parotid." In my 2 cases treated by the toxins the diagnosis was not only confirmed by a competent pathologist, but further by a history of repeated recurrences after operation. Another case still is also worthy of special mention, inasmuch as it shows that the toxins may be taken for long periods of time without harm. The patient, a well-known physician, with eight times recurrent spindle-celled sarcoma of the soft parts of the chest (anteriorly), was treated with small doses of the mixed toxins with varying intervals of rest for upward of two years. The patient regained his usual health, and has now been perfectly well over 6 years from the beginning, and 4 years since the cessation of the treatment. The tumors, while originally pure spindle-celled, were becoming more mixed with round cells and more vascular with each recurrence; in other words, the disease, as so often happens, was increasing in malignancy until the toxins were begun.

In addition to these 15 cases that have passed the 3-year limit, I have had 8 others in which the tumors disappeared. One, a spindle-celled sarcoma of the abdominal wall, was well 1 year and 6 months, when the patient returned to her home in Europe and was lost sight of. One, an extensive round-celled sarcoma of the iliac fossa, was well 1 year and was then lost sight of. A third, a spindle-celled, recurrent sarcoma of the leg, is now in perfect health, without recurrence, nearly two years after treatment. A fourth, a twice recurrent, spindle-celled sarcoma of the palm of the hand, disappeared and the patient remained well 2 years and 6 months, when the tumor recurred. Refusing amputation of the arm, she was under the care of a Christian scientist for 8 months, during which time the tumor in the hand reached the size of a cocoon and extended above the elbow. I then amputated the arm just below the shoulder-joint,

but she died of metastases 3.5 months later. Though the patient was an especially intelligent girl twenty-two years of age, while under the Christian Science treatment she watched a small tumor, the size of an English walnut, grow to the size of a cocoon, and yet was made to believe it was actually getting smaller and improving. She also stated that she felt no pain. This is a good illustration of the utter impossibility of placing any value upon personal statements of patients in regard to improvement or cure of malignant tumors by Christian Science.

A fifth case, a chondro-sarcoma of the ilium, of large size, disappeared, and the patient after remaining well for 7 months, had a recurrence which proved fatal in about 1 year's time. A sixth, a round-celled angio-sarcoma of the breast, was well 6 months later, when the patient was lost sight of. A seventh, a recurrent fibro-angioma of the lip, was well when last heard of, over two years after treatment; and an eighth, a recurrent, spindle-celled sarcoma of the thigh, disappeared, but the patient, after remaining well for a year, had a recurrence locally and in the groin, which no longer yielded to the treatment.

In addition to these 23 personal cases, I would mention 2 other cases in which I directed the treatment, although it was carried out by other surgeons. One case (Johnson's), a large-spindle-celled sarcoma of the pharynx, entirely disappeared, and the patient was well more than 6 years later. The second (Storrs and Griswold's), an inoperable sarcoma of the breast and axilla, disappeared under seventy-eight injections of the mixed toxins, and is now well more than 4 years after treatment. The diagnosis in both of these cases was confirmed by microscopic examination, in the latter case by the highest authority in this country, Prof. William H. Welch of Johns Hopkins University. *William B. Coley.*

CANCERUM ORIS. See Mouth, etc.

CANELLA BARK.—*Canella Alba*. Wild Cinnamon. The bark of *Canella alba* Murray (fam. *Canellaceae*). This is a handsome, middling-sized, spicy, evergreen tree, with thick, shining, aromatic leaves and small, purple, deliciously fragrant flowers. The bark of the smaller branches is silver-gray. It is a native of the West India Islands, especially of Jamaica, Cuba, and the Bahamas, and also of the southern part of Florida. The bark of this tree was first made known in Europe in the early part of the seventeenth century, and since then has been in continuous but very limited demand. It has been frequently confounded with Winter's Bark (*Drymis Winteri* Forster), and with *Cinnamodendron corticosum* Miers. It is now very little used excepting in its home, where it is highly esteemed, more as a condiment than as a drug.

Before the bark is collected, the limbs are generally beaten all over, in order to loosen the outer layers, which are discarded, and then the inner portion is separated in quills and chips and dried. It comes in broken quills, sometimes 30 or 40 cm. long and .5 thick (12 to 15 in. by ½ in.), but averaging much smaller, say from 5 to 10 cm. long by 2 or 3 mm. thick; the outer surface is roughish and bright buff-colored, the inner smooth or finely striated, yellowish or creamy white; fracture short and granular, odor rather agreeable, cinnamon-like; taste pungent and bitter. It contains numerous large oil cells, especially in the outer portion.

The leading constituent is the essential oil, of which it contains from three-fourths to one per cent. It is a composite oil, capable of being separated into several, one of which is *eugenol*, the leading ingredient of oil of cloves. With this there is some cineol. A considerable percentage of mannite can also be separated. The bitter principle needs further study. Canella is a stimulant tonic, similar to other aromatics, over which it appears to have no other advantage than the possession of a bitter principle. It is not poisonous, and is seldom given alone, in doses of .5 to 2 gm. (gr. viii. to xxx.). *W. P. Bolles.*

CANITIES, or grayness of the hair, may be congenital or acquired, partial or complete.

Congenital canities usually occurs in the form of tufts, but may occur as round patches. This form of canities is rare. In some families it is hereditary, a white tuft of hair occurring in a large number of their members. General congenital canities is part of that general absence of pigment that is known as albinism.

Acquired canities is the form most often seen. It usually begins at about thirty-five years of age, but in some families and under certain circumstances it may begin much earlier. Beginning in early life, it constitutes premature canities; beginning at middle life, it is one of the changes incident to growing old. Few people reach fifty years of age without some gray hair.

The hair on the temples is most often that which first changes color, though there is no definite rule as to where the disease first appears. The beard may be first affected, but usually it is affected secondarily to the scalp hair. The pubic and axillary hair may escape all change in color, though at last they, too, generally are affected. When once grayness begins it is slowly or rapidly progressive. Exceptionally and rarely the normal color may return to gray hair, just as it is possible to have a third set of teeth. The change in color takes place first at the root of the hair. As the pigment becomes more and more deficient the color of the hair slowly changes from gray to a creamy or snowy white. In most cases the change in color is the only change that the hair undergoes. Alopecia may set in, but it bears no definite relation to change in the color of the hair.

Too many well-authenticated cases are now on record to allow of doubt as to the sudden occurrence of canities, over night in some cases. Such instances are almost always in relation to severe mental shock, such as the reception of some fearful intelligence.

Ringed hair is a peculiar and rare form of canities in which the hairs are marked by alternate rings of white and normal color. The diameter of the hairs is unchanged. The white rings are narrower than the colored ones. Very few of these cases are on record.

ETIOLOGY.—Canities is due to an interference with the pigment formation in the hair papilla. The gray color is the combined result of a deficiency of pigment, the presence of air bubbles between the cells of the cortex, and the essential color of the hair. When the hair is white there is no longer any pigment in the hair. The occurrence of sudden blanching of the hair is due to the entrance of air bubbles between the cortical cells. That air between the cells is one factor in causing a gray color is shown by placing a gray hair under the receiver of an air pump and exhausting the air. It will be seen that the hair regains its normal color to a greater or less extent.

Age, heredity, nervous shock or strain, neuralgia, injury to the scalp, and all debilitating diseases, are predisposing causes of canities. There is no adequate explanation for the occurrence of ringed hair.

TREATMENT.—Nothing can be done for most cases of canities. If it is due to some removable cause the color may return when the cause is removed, but no promise of this should be made. Jaborandi and acetic acid seem to have some influence on the color of the hair, and may be tried, the first internally and the last externally. Hair dyes should never be advised. Once used they must be persisted in. Many of them are harmful, especially those containing lead. *George T. Jackson.*

CANNABIS INDICA.—*Indian Cannabis*. *Indian Hemp*. "The flowering tops of the female plant of *Cannabis sativa* Linn., grown in the East Indies" (U. S. P.). "The dried flowering or fruiting tops of the female plant of *Cannabis sativa* Linn., grown in India, from which the resin has not been removed" (B. P.).

Cannabis sativa is indigenous to Central Asia, but has been cultivated throughout Europe and America for its valuable fibre, from which hemp is manufactured. It is a member of the order *Urticaceae*, and allied, botanically,

to the common hop plant *Humulus lupulus* Linn. The United States Pharmacopœia has adopted the name *Indian cannabis*, as the name of Indian hemp is often given to a native plant, *Apocynum cannabinum* Linn., which is entirely different and bears no botanical or therapeutic resemblance. *Asclepias incarnata* Linn. is also popularly known as white Indian hemp.

Cannabis sativa is a large, very variable, annual herb, with an upright, slender, usually branching stem from 1 to 3 metres high (3 to 10 feet), long-petioled, graceful, palmately divided leaves, and small, clustered, dioecious flowers. The bark of the stems and branches has an exceedingly tough fibre.

The leaves are opposite (or alternate above), stipulate, and consist of from five to seven (excepting near the top of the stem, where they are simpler) linear-lanceolate, pointed, sharply serrate leaflets. Flowers in axillary clusters. In the staminate on male plant the flowering top is in lax, spreading, or drooping panicles, consisting of five sepals and as many opposite, large-anthered stamens. In the female plant it is in small, erect spikes, each flower in the axil of an upright, pointed bract, consisting of a single one-seeded, two-styled carpel enveloped in a broad, spathe-like, one-leaved perianth. Fruit (the hemp seed of commerce), a roundish-pointed acheneum containing a single pendulous, oily seed.

The plant contains a large amount of resin, which exudes upon the surface of the plant, more particularly upon the flowering branch. This resin becomes most abundant at the period of fructification, and as the fruit forms it diminishes in a very marked degree. During cultivation any loss of resin is prevented by eliminating the male plants or by gathering the tops before the fruit begins to form. In temperate climates the plant is almost destitute of resin, and for medicinal purposes that which is grown in India and Southern Asia is alone utilized.

Indian hemp is collected in three forms: first, the flowering tops of the female plant, known as "gunjah," which we recognize officially in the Pharmacopœia; secondly, the leaves, "bhang," which are used for smoking; and, thirdly, the resin, "churrus," or "charus," which enters into the composition of "hashish," and is also used for smoking.

The tops as they reach us consist of compressed masses of branches and leaves with flowers, and at times with specimens of immature fruit, the whole matted together

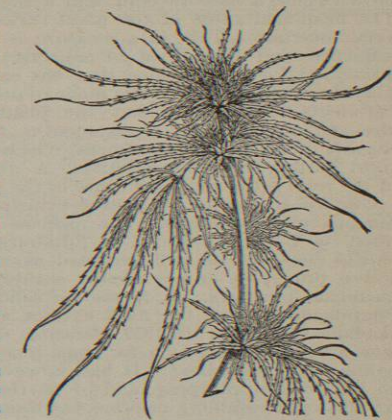


FIG. 1110.—The Hemp Plant—Pistillate Inflorescence. (Baillon.)



FIG. 1111.—Staminate Inflorescence of the Same. (Baillon.)

by the resinous secretion. The leaves and bracts bear external oleoresin glands, and one-celled curved hairs, which are very characteristic and serve to identify the plant. The bases of these hairs are enlarged and frequently contain cystoliths. The tops have a greenish-brown color, a narcotic odor, and a slightly acrid taste. The medicinal value of the plant varies greatly and is very uncertain. This, in a measure, is due to climatic influence and the period of collection; but it is also accounted for by the time that has elapsed since the plant was collected and by its mode of preservation. Experiments have shown that the plant diminishes in strength, after a period of six months, when exposed to the air; while control specimens, which are kept in airtight bottles, still remain active. A gradual oxidation of the resin is the supposed cause of the change.

Our knowledge of the active principles of the plant remains very uncertain. The resin as originally separated by T. and H. Smith, of Edinburgh, in 1846, and named *cannabin*, is still accepted as representing the active principles, and is almost entirely employed for medicinal purposes. It forms the solid extract of the Pharmacopœia, and the fluid extract and tincture are alcoholic solutions. In 1857, Personne described *cannabene*, a volatile oil, which for some time was thought to be the active ingredient. It has, however, proved to be an impure sesquiterpene, and of no therapeutic value. An alkaloid resembling nicotine has been found at different times, but it never has had the characteristic action of cannabis.

Cannabin tannate is a preparation manufactured by Merck. It is introduced as a very reliable narcotic and devoid of all volatile and toxic principles.

During the last few years cannabis indica has been very thoroughly studied by Professor Marshall and his assistants, in his laboratory at Cambridge University. As an outcome of their investigations there has been produced a red oil to which they have given the name of *cannabinol*, and the chemical formula $C_{15}H_{24}O_2$. This they consider to represent the active properties of the plant, but their labors are not completed, and the comparative therapeutic value of the new compound is as yet uncertain.

Cannabis indica is much used by the natives of India, Arabia, and neighboring countries as an intoxicant. For this purpose the dried leaves and the resin are smoked, either uncombined with other ingredients or mixed with tobacco. In Arabia the resin is combined with opium and other narcotics to form the well-known "hashish." In some instances a decoction is made from the leaves and employed as a beverage to induce the intoxication. The effect produced is an inebriation of an agreeable character, exciting the individual to sing and laugh. There are pleasant and often gorgeous visions and hallucinations, with a sense of ecstasy, and more or less delirium, terminating in a deep sleep. The sleep may be cataleptic in character, the muscles being slightly contracted and the limbs pliable. Later observers have described a condition resembling hypnotism. During the intoxication the sexual propensities of the individual are stimulated, which has established its reputation as an aphrodisiac.

The craving for this stimulant is very prevalent among the Asiatics, and many who are addicted to its use are more or less continually under its influence.

The effect produced by cannabis indica varies according to the mode of administration. When the fumes are inhaled it is a stimulant and intoxicant. Its effect begins early, and if but a small amount is used, it passes off in half an hour or more. If it is taken into the stomach its action is slow, an hour or two elapsing before the drug is absorbed. In this way its stimulating effects are much less marked, and its depressant and narcotic action is more evident. As an anodyne and antispasmodic it is classed by many as ranking next to opium. In large doses it produces the same effect as when inhaled. Experimental work has shown that the primary stimulation rapidly passes and is followed by depression, loss of reflexes,

ataxia, diminished sensibility, a tendency to sleep, and stupor, with a certain degree of anesthesia and paralysis. The effect upon the heart and respiration is not a prominent symptom. The early stimulation continues for some time, and the depression of respiration and circulation becomes marked only as narcosis begins. The mode of death is uncertain, some observers reporting that death takes place from cardiac failure, while others state that the heart was observed to beat after the respirations had ceased. Upon the kidneys it exercises no direct action, but the tendency is to increased excretion of urine. It is stated that a decoction of the fresh plant is an active diuretic. No specific action upon the sexual organs has been detected, excepting that accompanying the general stimulation. Cannabis indica is not a dangerous drug. The physiological effects may be very marked, but to cause death a very large amount would be required. No authentic instance of its fatal effects has been recorded. In animals it is found that, of the fluid extract, μ x. will cause marked symptoms, but as much as ξ i. is required to produce death.

The therapeutic value of Indian hemp is due to its influence on the nervous system, and by some it is supposed to act directly upon the cerebral cells. Its sedative effect is most valuable in functional disorders and in pain not due to inflammation. It has proved of value in the aged when the mental faculties are weakened generally and when much restlessness and sleeplessness are prominent symptoms. In doses of gr. $\frac{1}{2}$ to $\frac{1}{4}$ at bedtime a calm and quiet sleep is secured, and the same action may be secured for weeks without increasing the dose. In melancholia and chronic alcoholic delirium of the aged, accompanied by depression, it has acted as an exhilarant, has produced the desired sense of strength, and has secured quiet and rest. In the restlessness of general paralysis and "temper diseases," in both adults and children, it has also been of the greatest service.

In painful maladies it has acted best in those of a functional character, such as neuralgia and migraine, either alone or when combined with constitutional remedies, as iron, quinine, and zinc, when such are indicated. In neuritis it proves of service only when given in addition to mercury, iodine, and other such remedies. It has also proved very serviceable in the fornication, tingling, numbness, and other sensory disturbances of the elderly and gouty.

It has been very successful in clonic muscular spasms such as the convulsions of children and adults due to reflex causes, in epileptiform convulsions due to organic disease of the central nervous system, and in cases of brain tumor accompanied by convulsions and other indications of central irritation. In true epilepsy it has proved useless. In numerous cases it has been given for a prolonged period until its full physiological action was produced, and yet it has failed to influence the disease in the slightest degree. It relieves the distress of spasmodic asthma and has proved very serviceable in spasmodic dysmenorrhœa not associated with metritis or with other inflammatory affections. It has proved of service in chorea, whooping-cough, hysteria, migraine, and neuralgia. It has also proved of particular usefulness in painful disorders of the stomach, when not accompanied by organic changes. It has proved a better sedative than opium, as it exercises hardly any derangement of the secretions. Its beneficent effects are increased by attention to the state of the secretions, and by the employment of alkalies, purgatives, and other stomachic drugs when such are indicated.

In administering this drug the great drawback has been the unreliability of the various preparations. To obviate this, it is advisable to restrict one's practice to the use of a single preparation, beginning with a moderate dose and gradually increasing until its physiological effect is produced. Notwithstanding the various active principles that have been described, the resin and its preparations are much to be preferred. Standardized extracts, both solid and fluid, are now carefully prepared, and either these or the tincture should be employed. The dose of

the solid extract is from gr. $\frac{1}{2}$ to gr. i., that of the fluid extract is from μ ss. to μ i. The advantage of the fluid extract is supposed to be due to the fact that only moderate heat is employed during its preparation. The dose of the tincture is from μ v. μ to xxx. The preparations should never be added to aqueous solutions as the resin immediately separates as an insoluble mass.

Beaumont Small.

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CANNES, FRANCE.—Cannes, a winter resort on the French Riviera, is picturesquely situated in a recess of the Gulf of Napoule. It is 660 miles distant from Paris, 120 from Marseilles, 19 from Nice, and 28 southwest of Mentone. "Unlike any of the other health resorts on the Riviera, Cannes extends over a wide tract of land, so that its eastern and western limits are some miles apart, and its attractions and beauties are not limited and concentrated in one particular spot, but are varied and widespread" (Burney Yeo).

It is well protected on the east, and partially so on the west, by an isolated mountain group called the Esterel. On the north, however, the higher ridges of the Alps are too far distant to afford proper shelter. Like Nice it is a windy place, the sharp, violent, and disagreeable *mistral* (northwest wind) prevailing frequently in February and March. It is less sheltered than Mentone and San Remo, and consequently the climate is less equable. The general characteristics of the climate of this resort are mildness, abundant sunshine, moderate average rainfall, and, for the seashore, a low relative humidity. The winds and the lack of equability, particularly between the sun and the shade and the day and night temperatures, are some of the objectionable features. "The Riviera," says Burney Yeo, "is a land of sunshine and a land of winds. It is a land of intense, brilliant sunshine and of cold, chilling shade." "The deceptive combination," says Lindsay, "of brilliant sunshine with cutting blasts is the great climatic defect of the Riviera." The great and continued popularity of this, as well as of the other resorts of the Riviera, depends not so much on the intrinsic excellence of its climate, as on its comparative superiority over the usual climate of the more northern portions of the Continent and of England. Climates like pleasures are often judged by comparisons, and when, for instance, we compare the winter climate of London or Vienna with that of Cannes, the latter appears quite superlatively excellent. But if we compare the climate of Cannes with that of some resorts on the opposite coast of Africa or in Southern California, or with that of many of the resorts in our Southern States, Cannes decidedly suffers by the comparison. When, on the other hand, one considers the beauty of its situation, the variety and charm of its scenery, the richness of its vegetation, and all the fascination incident to a resort on the beautiful Mediterranean coast, Cannes surely has few superiors. It is to be borne in mind, say Burney Yeo and others, that at Cannes one can avail himself of two somewhat different climates, according as he chooses a residence in the neighborhood of the seashore or inland in the valley of Cannel, for example, about two miles distant from the sea, where greater protection for dwellings and promenades is afforded. All writers upon the latter climate refer to it as "bracing" and "exciting," with a tonic and stimulating atmosphere.

The following meteorological table arranged from Marcelet's* personal observations, extending over a period of from two to six seasons, will give the reader a means of

comparing this with other climates. The data are for the winter season, extending from November to April inclusive:

CLIMATE OF CANNES, FRANCE—OBSERVATIONS OF W. MARCET, M.D. (FAHRENHEIT SCALE.)

	November.	December.	January.	February.	March.	April.	Season.
Temperature—							
Mean average temp.	52.6°	46.3°	48.0°	48.8°	51.0°	55.5°	50.8°
Average daily range.	12.3	12.4	12	13.4	13.2	12.8	
Mean of warmest.	58.8	52.5	54	55.5	57.6	62	
Mean of coldest.	46.5	40.1	42	42.1	44.4	49.1	
Mean maximum sun temperature.	99.7	91.6	96.1	106	114.7	120.7	
Mean lowest night temperature.	38.4	31.4	32.2	33.8	35.4	41.9	
Precipitation—							
Average in inches.	5.17	4.51	1.69	1.46	3.42	4.05	20.31 E. and S. E.
Wind—							
Prevailing direction.					W.	E.	S. E.
Calm days.	10.7	11.7	12.5	8.2	3	2.7	48.8
Light to fresh.	12.7	13.5	13	11.7	19.2	18.5	88.9
Stormy to gale.	6.2	5.7	5.5	7.2	8.7	8.5	41.8
Humidity—							
Average relative.	71.2%	72.7%	71.7%	75%	73.1%	74.3%	73%
Weather—							
Fine days.	17.5	18.8	21	20	21.3	18.4	117
Overcast.	2.1	3.5	3.8	3.1	2.6	1.5	16.6
Rainy.	9.5	8.8	6.3	5.3	7.1	8.6	45.6
Temperature of sea.	61°	57.1°	55.7°	55.5°	56.7°	59.3°	

The climatic characteristics of the various months are summarized by Marcelet as follows: "In November and December the weather is usually stormy and wet. January and February are fine, with occasional visits of the dry northwest winds. During these two months the air is usually calm in the morning with a pleasant light southerly breeze blowing in the afternoon, while a northerly land breeze commences at sunset and is continued during part of the night. March and April are windy and showery, the winds showing no particular regularity, although in general easterly with wet weather." "At night," continues Marcelet, "there is a sudden accession of cold together with the increase of atmospheric moisture at sunset and continued at night; therefore the importance of the invalid being indoors before sunset." Fogs are unknown, and there is an absence of mist. Occasionally the temperature sinks to the freezing point, and snow sometimes falls. As almost everywhere else, occasionally the unexpected happens, and a very wet or very cold season occurs, "and then," says Burney Yeo, "the sufferings of the visitors are very acute, much more so than at home." There is a considerable amount of lime in the soil, which adds to the disagreeable effect of the dust, which is always an annoying feature.

Dr. J. Henry Bennet wisely warns the visitor not to expect perpetual spring or eternal summer in the Riviera. "Although there is so much sunshine," he says, "so much fine weather, such immunity from fog and drizzling rain—it is still winter. Wind, rain, chilly atmosphere, and occasional cold weather, with snow on the mountains and flakes of ice in exposed situations, have to be encountered." The Riviera is not Southern California, and a climate similar to that of the latter region must not be expected. If the reader will turn to the article upon *California, Southern*, in this volume and compare the climatic tables of San Diego and Santa Barbara with that given here of Cannes, he will realize the difference. For instance, the average mean temperature for January at Cannes is 48° F., while at San Diego it is 53.6° F., and at Santa Barbara 51.2° F. Further, the rainfall at these two California coast resorts is only about half of what it is at Cannes, and the number of fair and clear days is considerably greater, and there is also less wind. Although the relative humidity is almost exactly the same, the complete absence of fog would seem to indicate a comparatively drier atmosphere at Cannes.

It is well to emphasize again the fact of the winds;

* "Southern and Swiss Health Resorts," by W. Marcelet, M.D.

they are the *bête noir* of Cannes, as indeed of the Riviera in general. Moreover, they seem to be quite incapable of classification. "They are legion," says Burney Yeo, and Marcet declares that their direction is so changeable that it is not worth while to record them—they blow hot and they blow cold, the sirocco from Africa and the bise from the Alps. They blow dry from the west and moist from the east. Dr. Cozalis, quoted by Burney Yeo, gives his results from several years' personal experience as follows:

"Toward the last week in October, the wind sometimes from the east, sometimes from the west, becomes high. In November there is always a windy and rainy period lasting for from eight days to three weeks. The wind is rarely violent and never cold. During or after this there

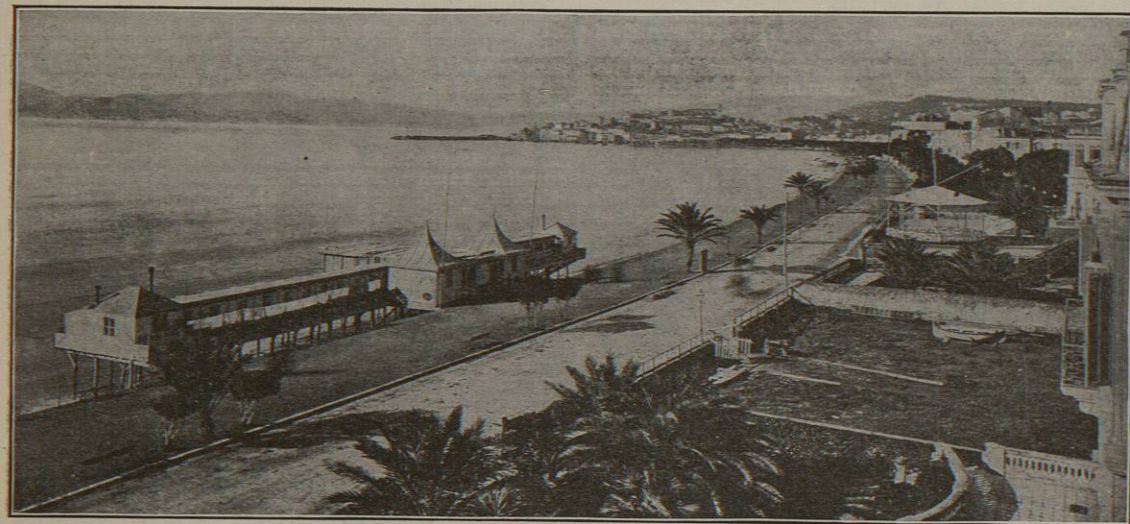


FIG. 1112.—Boulevard de la Croizette, at Cannes.

may be a few days of mistral; then commences the reign of the east wind, a mild wind which lasts till February. December and January are the least windy months. West winds begin again in February, and the northwest (mistral) may blow for two or three days. In March the winds are often violent, and bring not infrequently torrents of rain, as in November. In April the winds are very variable."

As has been previously mentioned, Cannes offers not only opportunities for residence directly on the sea, with a purely marine climate, but also situations inland said to be more bracing and less exciting, on the Californic and in the district of Cannet, where also there is greater protection from the winds. The climate along the shore is exciting and warm; inland it is more bracing and less exciting.

The class of cases which are suitable for the climate of Cannes are, first of all, tuberculous affections, especially in children. Grebner* writes of the favorable results obtained here with children affected with scrofula, tuberculosis of the bones, joints, and glands, rachitis, and anemia. The Dolfus Asylum, a German institution for poor children from four to fourteen years of age, is situated here. The children come at the beginning of October and remain until the middle of May. They spend the entire day out of doors, sleep in unheated rooms with open windows, and bathe in the sea the winter through. The advantage of this location over other marine resorts upon the Atlantic and north sea coasts, for a similar class

* Jahrbuch für Kinderheilkunde, N. F., 42, 1896, p. 284.

of cases, is the length of time during which the cure can be continuously carried out. For eight or nine months long the children can live out of doors and take the sea baths. At first the general health improves and the weight increases, and later the local conditions begin to show improvement. Nearly all cases of anemia, of whatever age they are, are said to manifest marked amelioration at Cannes. Cases of slow convalescence from acute diseases; various chronic catarrhal affections—bronchial and laryngeal,—emphysema, chronic pleurisy; certain forms of chronic gout and rheumatism; Bright's disease and diabetes—all these are said to be benefited by a winter residence here. On the other hand, this climate is unsuitable for hysteria, neuralgia, insomnia, and various other nervous maladies, and for febrile cases from what-

ever cause. "All invalids," says Burney Yeo, "except those who suffer from scrofulous or lymphatic conditions, are advised to keep away from the shore."

This climate, like any other mild, sunny one, is also favorable for the feeble from age or other causes. As to pulmonary tuberculosis, the writer does not believe that Cannes, or the Riviera in general, is a favorable climate for its cure. Certain stages of it, more particularly the chronic condition, may be temporarily benefited and life prolonged, but, as Lindsay says, "after a prolonged and thorough trial of the Riviera, but few authorities report many cases of cure." Undoubtedly sanatorium treatment in this climate would show better results, but so many other more favorable localities are now known in Europe, for the strict curative treatment of this disease—such, for example, as Davos, Arosa, Leysin, Les Avants, and others—that it seems probable that the Riviera will not in the future, as in the past, remain the Mecca for consumptives. Moreover, the profession is more and more becoming convinced that it is better to establish sanatoria for consumptives at home, in the country and locality where the patients live; for almost everywhere a suitable location can be found where the air is pure, where there is an absence of high winds and dust, and where a reasonable amount of sunshine exists. These are the climatic conditions which are really essential to a cure, although with them must be united the hygienic-dietetic régime which experience has shown to be equally important if the best results are to be secured.

Cannes—derived from *Canna*, the reeds in which the fishermen's huts originally stood—has now grown to be

a city of 23,000 inhabitants. It owes its prosperity in a great measure to the first Lord Brougham, who took up his residence here in 1834. It is especially popular with the English, who frequent it in great numbers. Ten thousand visitors spend the season here, and from fifty to sixty thousand pass through the town. It is almost unrivalled in the beauty of its situation and the charm of its surroundings, and has been called the "Pearl of the Riviera." There are innumerable excursions by sea and land, and the surrounding country is exceedingly beautiful. It has a rich and varied vegetation; here flourish the eucalyptus, olive, vine, orange-tree, and the myriad shrubs and flowers of a luxuriant southern growth.

The accommodations are excellent, but are said to be expensive. Most of the hotels, pensions, and villas are surrounded with gardens. "One great advantage of Cannes," writes Dean Alford, quoted by Burney Yeo, "over other Riviera stations is, that you have actual forest scenery within fifty yards of your hotel." The town is abundantly supplied with good drinking water. The sanitation seems to be well looked after, and the system of supervision of apartments occupied by consumptives is so complete and thorough that it will be instructive to mention it.

When a physician has a consumptive patient occupying a room in a hotel or villa, he notifies the proprietor when the room is vacated. The proprietor takes this notification to the sanitary authorities, who disinfect the premises and return the original card of notification to the physician with a note made on it that disinfection has been made, and the physician then is assured that the room is safe for occupancy again. In addition, there is kept, at the mayor's office, a list of the hotels and villas whose proprietors have agreed to conform to all the suggestions made by the physicians as to disinfection and renovation. Whenever a physician is asked to recommend a hotel or apartment, he has this list, which is public, to refer to. This arrangement works for the mutual interests of the proprietors and visitors.

Cannes has become so popular and fashionable that for this reason it is objectionable for the true invalid; he is tempted to over-exert himself in the social life and gaiety of the place.

Edward O. Otis.

CANTHARIDATE OF POTASSIUM.—The application of the cantharidins to the treatment of tuberculosis was introduced at a meeting of the Berlin Medical Society on February 25th, 1891, by Dr. Oscar Liebreich. The value of this drug as a remedy rested on its well-known property of promoting exudation of serum from the capillaries; an effect not only directed to the vessels of the surface of the body, but also produced in various organs, as the kidneys, sexual organs, and lungs, particularly when the drug is administered internally. This is the special action of the drug on the healthy tissues, and Liebreich assumed that an irritated condition of any set of capillaries would favor this process of exudation, or, in other words, that a dose too small to produce any effect on healthy capillaries would cause an exudation from those inflamed. This would relieve the congested cells and restore the tissues to a more healthy state; and, further, he claimed, as it had been shown that serum possessed decided germicidal properties, it should prove antagonistic to the growth of tubercle and assist in the effort at repair.

A number of cases treated by Liebreich's method were shown by himself and some of his colleagues; cases of laryngeal phthisis, lupus, and pulmonary phthisis were all said to be benefited. When the diseased parts could be observed, the action of the drug was found to be such as had been described by Dr. Liebreich, the ulcerated surface being more healthy and showing signs of repair. When the lungs were affected the expectoration became free and profuse, the edema decreased, and the local condition improved; the fever also diminished, and other constitutional disturbances lessened. Liebreich stated that no reaction followed its use, but other observers reported a slight rise of temperature, headache, disturbed

digestion, diarrhoea, etc. If the dose be too great it produces the characteristic symptoms of cantharides poisoning—pains in the loins, albuminuria, strangury, and hæmaturia.

Pure cantharidin being insoluble in water, the cantharidate of potassium and the cantharidate of sodium were selected as the salts most suitable for using the drug hypodermically. As the amount of cantharidin in these salts varies greatly, Liebreich advised the use of a certain solution which he had found by experiment to be most suitable. It is prepared as follows: cantharidin, .2 gm.; potassic hydrate, .4 gm., most carefully weighed and heated over a water bath in a 1,000 c.c. flask, with about 20 c.c. of water, until a clear solution results; then add water gradually, while still heating, to the full quantity.

Of this solution m , viij, to xvi, are administered hypodermically. Its use should not be continued for any length of time; at least every third day should be allowed to intervene without the drug being administered.

The effect on the kidneys must be carefully watched, and the dose lessened, or its administration stopped, should any symptoms of strangury occur. In kidney disease its use is, of course, contraindicated. To overcome the painful local irritation that frequently follows at the site of injection, it has been recommended to prepare a solution containing cocaine, which prevents the pain. Two parts of the hydrochlorate of cocaine are added to one of cantharidin and two of caustic soda; this is formed into a solution, and gr. $\frac{1}{10}$ to $\frac{1}{20}$ is used as a dose. The addition of cocaine is also thought to lessen its tendency to irritate the bladder or kidneys.

This treatment was extensively applied to all forms of tuberculous disease, but it did not prove of sufficient value to warrant its continued use, and it is now rarely resorted to. It undoubtedly produces the action described by Liebreich, causing a freer exudation of serum, etc., but this does not lead to any improvement in the symptoms or tend to any permanent benefit. Post-mortem examinations of patients who have been subjected to this treatment fail to furnish any evidence of repair or beneficial effect on the disease.

Beaumont Small.

CANTHARIS.—*Spanish Fly.* This rather inaccurate name is given to *Cantharis vesicatoria* De Geer (*Lytta vesicatoria*), order *Coleoptera*, a brilliant green beetle, with a long, cylindrical body, a disagreeable odor, and powerfully irritant properties. It is about an inch in length, and from one-fifth to a fourth of an inch in breadth. It has a good-sized, ovoid, heart-shaped head, filiform, black antennae of eleven joints, a distinct, rounded thorax, and long, straight wing covers. The legs are provided with five tarsal joints, excepting the two posterior ones, which have only four. The wings are large, brown, translucent.

The odor, even when the insect has been dried for a long time, is strong and characteristic. The perfect beetle appears in great numbers in its native countries, about the middle of summer, upon poplars, ashes, lilacs, privets, and even upon roses and several other domestic shrubs, whose leaves it devours. The acrid effluvia emitted from it can be smelled at a considerable distance, and when the insects are abundant, it is said to be dangerous to persons sitting under the trees where they are.

This beetle is a native of Southern and Middle Europe,

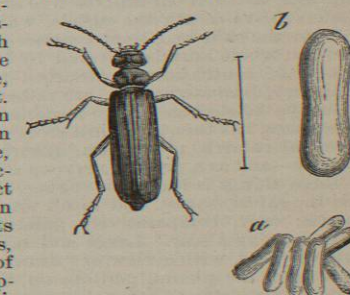


FIG. 1113.—Blistering Beetle. Natural Size: a, Eggs, somewhat enlarged; b, a single egg, greatly enlarged. (Moquin-Tandon.)