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SKETCH  
OF  
CANNES & ITS CLIMATE  
—  
DR. DE VALCOURT



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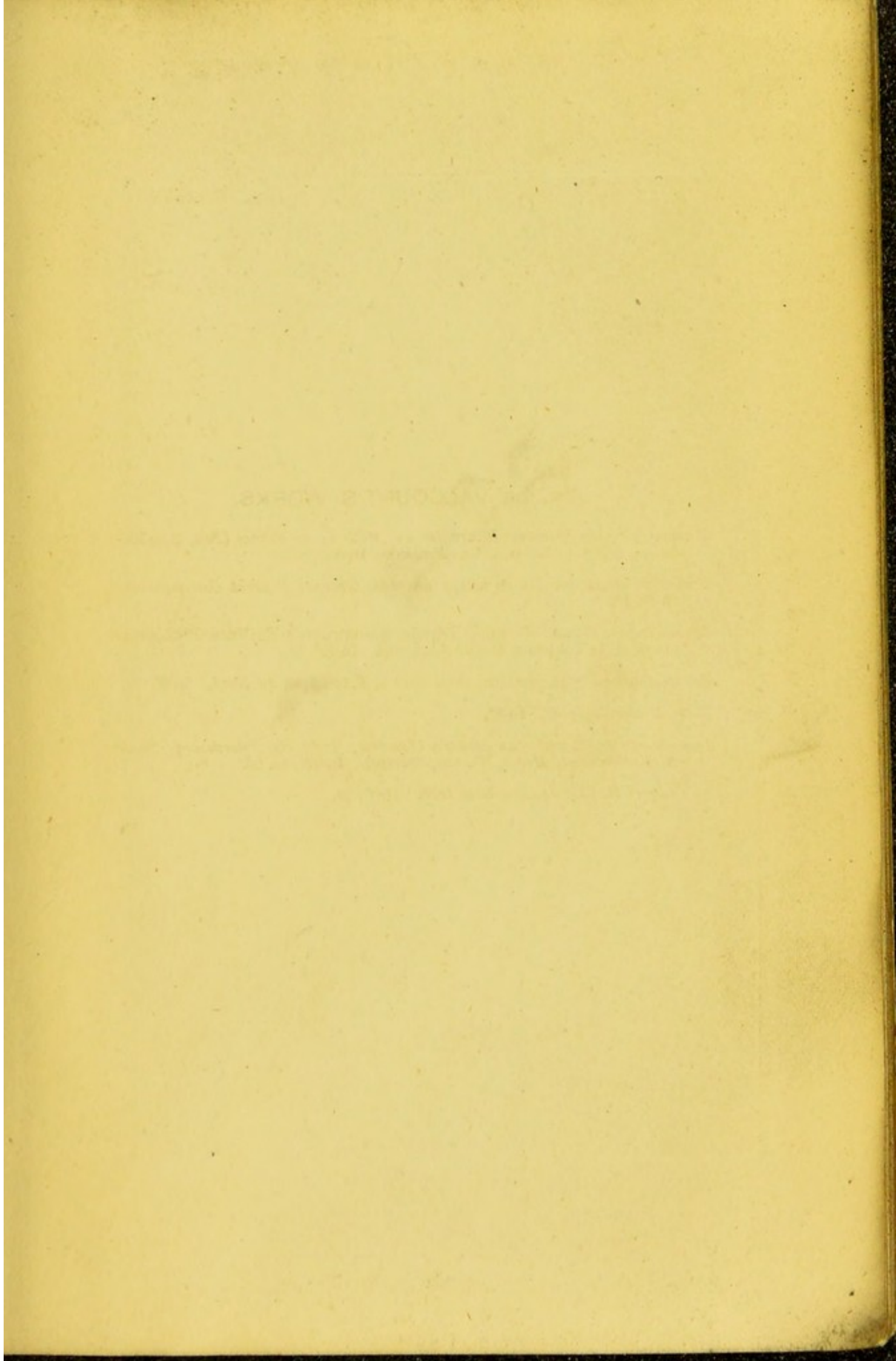
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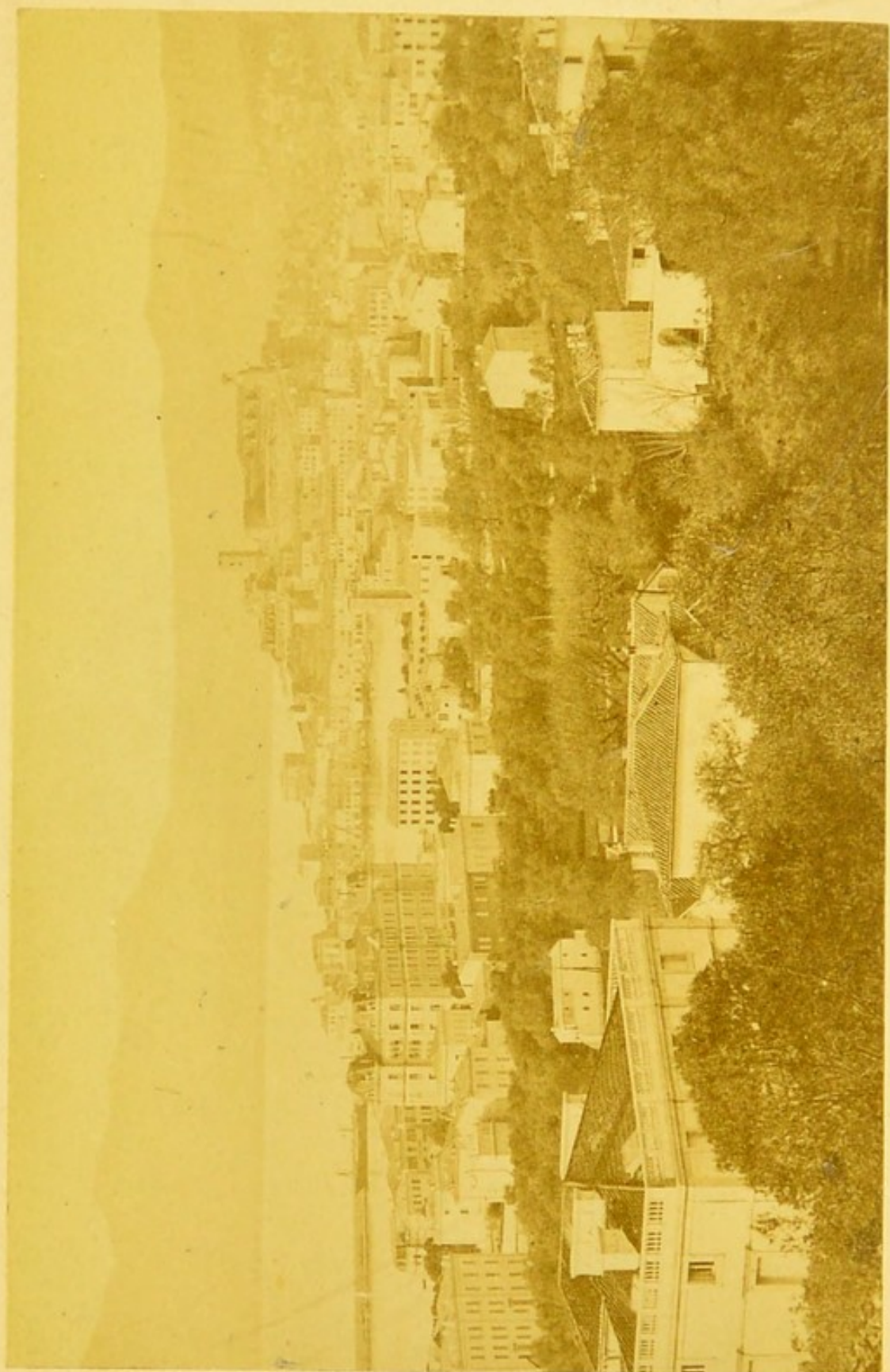
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S K E T C H

OF

CANNES AND ITS CLIMATE

BY

TH. DE VALCOURT, M.D.P.

MEMBER OF THE MEDICAL SOCIETIES OF PARIS, RHEIMS, CHAMBERY, ODESSA, OF THE COLLEGE  
OF PHYSICIANS OF PHILADELPHIA, OF THE MEDICAL ACADEMY OF SWEDEN, ETC.,  
PHYSICIAN AT CANNES (ALPES MARITIMES).

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Second Edition, Enlarged,

*With Photographic View and Six Meteorological Charts.*

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OF LONDON

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PHILIP STUART KEY

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## INTRODUCTION TO THE SECOND EDITION.

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THIS Second Edition comprises additions and alterations in each chapter.

The List of Plants from Hot Countries acclimatized at Cannes, has been reproduced from the French edition.

I call the attention of my readers principally to three new meteorological charts, which brings the total number up to six. They will see, according to the preceding explanations, how much this mode of observation demonstrates the differences existing between the meteorological constitution of the south coast of the Maritime Alps and that of Paris and London.

# MEMORANDUM TO THE BOARD OF DIRECTORS

The following information was obtained from a review of the records of the Board of Directors and the minutes of the meetings held during the year ending December 31, 1954. It is noted that the Board of Directors has not held a meeting since the meeting held on June 15, 1954. The Board of Directors is composed of seven members, of whom only one, Mr. J. H. [Name], is currently serving. The Board of Directors is authorized to exercise all the powers and perform all the duties of the corporation, subject to the control of the stockholders.

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## MEDICAL INDICATIONS.

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THE number of those who come to sojourn in the South, especially at Cannes, during the winter, increases every year in considerable proportions. To justify this periodical migration, I cannot do better than quote a great authority, viz., Dr. Walshe, who in his "Treatise on the Diseases of the Lungs," expresses himself as follows: "Experience justifies us in placing among the most important agencies, for favourably modifying the course of various chronic diseases, migrations from one climate to another; and further, experience likewise proves that, among chronic maladies so remediable, those of the lungs hold a very high rank."

Since the publication of my book upon "Climatologie des stations hivernales du Midi de la France," I have re-visited each of those residences

and examined the Italian coast as far as Leghorn, stopping particularly at Bordighera, San-Remo, and Pisa, in order to verify the correctness of my first conclusions, and to form as exact an opinion as possible of the climatic value of each station.

After having passed five winters at the different French stations, and having spent more or less time in those of northern Italy, I established myself at Cannes. The choice was made because this locality possesses three essential conditions: 1st, a shelter from land winds, formed by a continuous amphitheatre of hills and mountains facing directly south; 2ndly, the absence of any torrent whose broad and gravelly bed, generally dry and hot in the sun, would be the cause of a constant current of air; 3rdly, the possibility of placing the invalids either close to the sea-side, or so far from the beach as to be beyond the influence of the saline breeze. This last point is one of special importance.

Before examining in detail, the climate of Cannes, let us consider first what invalids have to gain by coming to live during the winter in the South of France. I do not hesitate to affirm, that a residence in a warm climate is a powerful means for prevent-

ing or combating pulmonary consumption, scrofula, rheumatism, and in general all affections occasioned or aggravated by cold and moisture.

The remarkable publications, which within a few years past have appeared upon consumption, have shown very clearly that this terrible disease results from a profound disturbance of nutrition. Overcrowding, want of light, humidity, over-work, insufficient or irregular nourishment, want of exercise, grief, abuse of pleasure, such are the productive causes, according to M. Bouchardat, of that *physiological poverty* which is the result of an excess of waste and an insufficiency of repair. Physiological poverty produces consumption not only among men, but also among animals.

“I see in phthisis simply one of those morbid changes which represent a special condition of the constitution.” (Graves.)

“Tubercle is always a feeble growth, a miserable neoplast from the beginning.” (Virchow.)

“The perversion of nutrition may be primitive and accidental (*phthisie acquise*), or consecutive upon a pre-existing constitutional malady (*phthisie scrofulouse*). We are able to retard, if not prevent the genesis



of tubercles in persons predisposed ; by preventing in them so far as possible the development of inflammatory affections of the broncho-pulmonary apparatus. Such is the practical application of the new facts of patho-genesis." (Jaccoud.)

"Under careful treatment life may be prolonged for many years in comfort and usefulness, and in not very few cases the disease is so permanently arrested that it may be called *cured*." (C. T. B. Williams.)

"The consumptive patient may, under favourable circumstances, live for a long period, even to the ordinary span of life, and as he lives on, may gain sufficient strength to resume his former occupations and duties." (C. Theodore Williams.)

"Consumption is cured more frequently than is supposed. Its course is not uniform, in a great many cases it is interrupted. The truces which so frequently succeed the first attacks of the disease may be made final, or may be indefinitely prolonged ; not only can consumption be cured, but it can be cured at any stage." (A. Gueneau de Mussy.)

These quotations are sufficient, I think, to show

the position of medical science as well as the opinion of some of the principal practitioners on the nature and curability of pulmonary consumption.

The resources of hygiene should be employed to prevent the development of tubercles or to check the new manifestations of the diathesis; while therapeutic means should be reserved for combating the inflammatory symptoms, which are associated with tubercles at the period of their evolution. But the resources of hygiene are decidedly insufficient during the winter in cold climates, since the purity of the air, the light and warmth of the sun, for which there can be no substitutes, are wanting.

The air is the most important of the aliments, it is also in consumption the most effective medicine; it not only furnishes materials necessary to the formation of the blood, but it also introduces into the blood absorbable substances for which it serves as a vehicle, it exercises moreover a direct action upon the respiratory mucous membrane; and when we remember that we respire from fifteen to twenty times a minute, and that each inspiration introduces into the lungs about thirty cubic inches of air, we may understand the power of this agent.

Scrofula and consumption are much more frequent among the poorer, than among the better conditioned classes, since the causes of *physiological poverty* exist more frequently among the former; the course also of consumption is rapid, and it is seldom cured from want of the means to correct a perverted nutrition and to overcome that special constitutional condition which leads to the production of tubercle.

When the disease is confirmed, it progresses with frightful rapidity among those unfortunates who are forced to take refuge in hospitals; for whatever improvements may be introduced into these establishments, the air will necessarily be vitiated in a room occupied by several patients. The warmth of the stove is no substitute for that of the sun, nor the walk in the court for one in the country. In the North, certain unhealthy conditions may be remedied for the rich man, but not all. During the winter the light and warmth of the sun are wanting as well as atmospheric purity; forced to remain indoors during several months he is poisoned by his own respiration. In the South, on the contrary, he can walk in the country almost every day, while the windows of his room are opened for several hours, giving access

to a pure air as well as to the vivifying rays of the sun.

One can understand how under such conditions a real and lasting amelioration can be produced; the work of tuberculization will be checked, the morbid growth in place of softening will change its character; little by little saline particles will be substituted for the fatty, and the tubercle will become a chalky mass. In this event the proportion between the organic and inorganic elements is, according to Lombard and Thénard, as 4 to 96, whilst recent tubercle is composed of 98 parts of animal matter and but 2 of saline. In undergoing the chalky transformation, tubercle having become inorganic, remains definitely quiet and ceases by its presence to give rise to any inflammation, so that if not too large an extent of the lungs is attacked, respiration is easily effected, and the consumptive patient cured, can return home and resume his occupations, avoiding however with the greatest care a relapse into the condition of *physiological poverty*, which gave rise in the first instance to the genesis of the tubercles. If, on the other hand, the disease has been so grave as to affect a considerable portion of the lungs; as all

that portion which has been the seat of tubercles, transformed at a later date into cretaceous deposits, remains for ever incapable of aiding in respiration, it may be that the healthy portion of the pulmonary tissue is only just sufficient for the processes of blood change, and that it cannot be reduced to a smaller volume without gravely compromising life. In this case, the cured consumptive patient should submit to the necessity of avoiding with the greatest care everything which may give rise to chills, and should pass the winters in the South, in order that his respiratory apparatus may not be called upon to perform more than it can accomplish.

A change of residence to the South of France is useless and even dangerous for the patient, who is unwilling to adopt the habits of life which alone can accomplish the desired result; yet it is frequently very difficult for the physician to cause the importance of this subject to be realized. "The preservation of the health by an excessive care," says Laroche-foucauld, "is itself a wearisome disease." Nevertheless, no remedies can take the place of certain hygienic measures.

The number of cures would be much more

considerable if invalids did not break through the required regimen, thereby disturbing the work of physiological restoration, not yet firmly consolidated; just like a man who, having fallen into the sea, foolishly loosens his hold of the rope, just as he is about to reach the shore.

The difference of climate between the North and South is so great that the invalid arriving at Cannes, and wishing to rely upon his own sagacity for the organization of his regimen, is almost certain to learn, when too late, how imprudent he is to think of forming a programme himself of the hygiene of a foreign country, when delicate health does not permit personal experiences to be made with impunity. It is evident that the medical directions should vary according to the cases. Nevertheless, we here give some general rules, which can be modified according to the particular circumstances.

23 The journey from Paris to Cannes can be done in twenty-two hours. A fast train leaves Paris at 7.15 p.m. to reach Cannes at 5.25 p.m. on the following day, passing through Dijon, Lyons, and Marseilles. In most cases we advise, that this journey should be effected without stoppage. It is easy to

secure a railway carriage or a *coupé*, according to the number of passengers. There are no changes to be made until you arrive at your destination; therefore it is quite possible to arrange invalids pretty comfortably. An expensive but agreeable way is to engage a saloon-carriage, which contains a large saloon with sofas and tables, a bedroom with a cabinet, and a smoking-room; the cost is calculated to come to the price of thirteen *coupé* places. The arrangements of this class of carriage are so well managed, that the fatigue of travelling is greatly alleviated. The advantage of travelling direct consists in avoiding stopping at stations, getting out at hotels, the difficulties of numerous departures, which augment the chances of catching cold, and prolong the journey without greatly diminishing the fatigues.

The first question on arriving at Cannes is the choice of a house. One invalid prefers living close to the sea, whilst for another the calm and balmy air of the mountains is ordered. But all should take a comfortable dwelling, with a southern aspect. The best way is to go to an hotel, and consult a doctor, who alone is competent, after a careful examination of the patient, to give a proper opinion on the subject.

What numbers of invalids, through want of such advice, have thrown away the advantages to be gained by a residence in the South ! A great number of these, begin by taking a lease for a whole winter without any advice, then they ask the doctor to approve of their choice of a house. But to give an opinion in a case of this sort, is a matter of delicacy ; for if the chosen locality does not suit the patient, and a change of residence is desirable, everyone is annoyed ; the invalid is provoked at having to pay for a house which does not suit him, and to look out for another, whilst the proprietor complains that his property is depreciated. The best way, therefore, is to make sure before, and not after settling down.

One's clothing must be appropriated to the temperature, and reasonably combined with the transitions of sun and shade. Following the examples of the Arabs and other southern nations, woollen clothing is preferable to other stuffs. An invalid ought to wear light woollen garments, and when taking a walk to carry a second one over his arm, also a comforter, so as to be prepared for any emergency. The use of a parasol is necessary, for the rays of the sun are so ardent, even in December, that one must



guard the head, whilst the rest of the body is penetrated by their beneficial influence. The choice of the daily walk ought to be determined by the direction of the wind, so as to avoid (which is quite easy with a little care) those which are injurious to the health. There, again, knowledge of the country and its meteorological conditions allows precious hints to be given. All invalids, without exception, should end their walks before sunset. For a few, going out of an evening may be permitted, after the dew has fallen, which takes place at the moment that the sun disappears from the horizon.

To proceed to the nourishment; it should also be framed according to regulations. Nobody disputes that the colder the climate, the stronger the food must be; the warmer the climate, the lighter the alimentation. Account must also be taken of the habits of the individual, and the rational regimen of the country he comes from, and of the suitable diet of the land he has come to. These precautions, minute enough and uninterrupted, appear wearisome and superfluous at first to those, who arrive in the country. Nevertheless, nothing is easier than to accustom oneself to them. Very often those who

are incredulous and think themselves wiser than anybody else, learn to their cost to recognise the great importance of the laws of hygiene. They are attacked by either rheumatism, bronchitis, or neuralgia, and grumble at the climate, to which they attribute that which comes alone from their own imprudence. Would it not be a thousand times better, to adopt the proper kind of life at the beginning, which is the more easy, as Cannes furnishes the charms of a country life surrounded by beautiful scenery, as well as the resources of a large town occupied by the *élite* of society?

The period of sojourn in the South, ought to begin in October or November, and not to end till May. It is most important not to leave before the return of the cold, which takes place in March or April. On hearing of fine days in the North, invalids are tempted to return home. The wise resist the temptation, the imprudent go, and often find a return of snow, which makes them regret this premature change. With the exception of a few days of wind, spring in the South offers much fewer vicissitudes than in the North. From the month of March, the sea is warm enough to allow

a certain category of persons to bathe ; a greater number can avail themselves of it, in April and May. The fine sand of the shore, the absence of current, the pleasant temperature of the water and air at this period of the year, all these conditions combined certainly give Cannes a special importance as a sea bathing-place in autumn and spring, notably for scrofulous or simply delicate children ; or, again, for chlorotic girls or women.

The following chapters, devoted to the topography, geology, vegetation, and meteorology, will make known the different resources of this country, so bountifully dealt with by Nature.

## TOPOGRAPHY.

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FEW places have grown more rapidly than the little town of Cannes. Within twenty years its population has doubled. While Nice enjoyed during the past century a reputation on account of its climate, which attracted to it, visitors from every part of the world, its humble neighbour was quite ignored. It so happened that in 1834 Lord Brougham, passing through Cannes on his way to Nice, was struck by the rich vegetation and the charming appearance of the country. After having examined the neighbourhood, he caused a *château* to be built in the midst of a beautiful grove of orange trees. His example was imitated by others, and the reputation of Cannes was established. I visited the locality for the first time in 1853. At that time there were few invalids, and still fewer tourists. The number of strangers coming from every northern country has since increased very

considerably from year to year, especially since the opening of the railway.

The prosperity of Cannes is to be attributed to the climate. "We have in France," said Dr. Amédée Latour in 1857, "certain localities which enjoy during the winter, a temperature so mild and uniform that the sick have no need of exposing themselves to distant voyages. I prefer above all others that of Cannes." The same opinion is given by Dr. Theodore Williams: "Cannes enjoys the advantage over Nice, of being less exposed to sudden changes in temperature on account of its superior protection from northerly winds."

The topography of the country explains its superiority. The mountain range of the Esterel above all, in offering a barrier to the Mistral, affords one of the principal advantages of this locality.

These mountains present a remarkable structure and conformation. Separated by a narrow valley from the chain of the Alps, they form a rocky buttress of elliptical shape, whose great diameter points north and south; its northern slope faces the Alps, its southern descends to the waters of the Mediterranean. On the west, the Esterel bounds

the valley of Argens and the canton of Fréjus ; on the east, the plain of Laval separates it from the hills of Cannes. This mountain chain embraces a territory of 108 square miles (12 miles north and south, by 9 east and west). The average height of the peaks, which compose it, is from 1,500 to 1,800 feet, the highest point has an altitude of over 2,400 feet. Its structure is granitic, while that of the neighbouring Alps is calcareous. The traveller coming from Fréjus, after having crossed the Esterel, meets with the river Siagne, which fertilizes the plain of Laval. The Alps lie to the north, distant seven miles ; the wind which passes over their snowy summits, comes unobstructed to lower the temperature of the plain, so that the mulberries of one side and the umbrella pines of the other, with a few olives, are almost the only trees in this spot, recalling the climate of Provence. When following the highway which runs parallel with the watercourse, the first hills of Cannes are gained ; an entirely different vegetation is observed, the pasture land disappears to give place to olive groves, to orange trees, to palms, and to a thousand other plants peculiar to warm countries. The hills leave between them and the sea only a

narrow strip of land, occupied to-day throughout almost its whole length by villas.

The town of Cannes (latitude  $43^{\circ} 34'$ , longitude  $7^{\circ} 06'$ ) has a southern exposure upon the shore of the Mediterranean. The old quarter, called the Sucquet, is built upon the side of Mont Chevalier. This hill, whose summit is occupied by the parish church, inclines towards the north, and the green hills which form the circumference of a semi-circular amphitheatre, with a radius of from one to three miles, at the bottom of which is the village of Cannet; these hills again approaching towards the sea, form the last bulwark of Cannes on the east. The road which leads to Antibes and Nice, passes by their feet; for more than two miles it is bordered with villas, so that there is an unbroken line of country houses for more than five miles, half on the west of Cannes on the Fréjus road, half on the east toward Antibes; moreover, the roads leading to Grasse, and also to Cannet and the surrounding hills, have scattered along them beautiful dwellings recently constructed.

Between Cannes and Antibes, facing the Gulf of Juan, where the first Napoleon disembarked on his

return from Elba, a second amphitheatre of hills, open to the south and perfectly sheltered, has begun to receive numerous residents during the winter.

South of Cannes, in front of the harbour, may be seen the Lérins Islands, Sainte-Marguerite and Saint-Honorat, two miles distant. The first is four miles in circumference. Here is the fortress, where the man with the iron mask was imprisoned during the reign of Louis the XIV.; here also is a great forest full of game, and the garden of a manor which is regarded as the warmest point in Provence.

The island Saint-Honorat, separated from Sainte-Marguerite by a canal 850 yards broad, is smaller than its neighbour, but its historic souvenirs, its picturesque sites, and the ruins of its celebrated monastery, make it a place curious as well as interesting to visit.

There is no better place than the terrace of the château of Sainte-Marguerite, from which we get a general view of the country. Turning towards Provence, in front is the shore and town of Cannes, the village of Cannet, the hills of these two parishes covered with a luxuriant vegetation to the summit, the Alps in all their splendour, more or less covered



with a snowy mantle; on the left, the Esterel and its vast forests; on the right, the cape of the Croisette, that of Antibes, the shore of Nice, and the mountain of Villafranca. Few spectacles are grander and more varied than this vast assemblage of mountains, hills, and shores, to which the purity of the sky and the transparency of the atmosphere, lend a magic splendour.

The beach at Cannes is one of the finest on the Mediterranean; it is sandy, with a gentle slope and unaffected by marine currents, circumstances which indicate it as an excellent spot for sea bathing, as well as for those sand baths which lately have been used with great success in the treatment of chronic rheumatism and certain forms of paralysis.

It does not come within my plan to describe the many beautiful sites which the environs of Cannes afford; this has already been done in a most interesting way, in a book published by M. Victor Petit.

Taking the city as a point of departure we have—  
1st. On the south: the sea, the Lérins Islands and the Gulf of Cannes forming almost an arc of a circle, whose two extremities are, on the east, Cape Croisette, and on the west, Cape Roux.

2nd. On the east: the shore, that may be traversed in a carriage as far as Cape Croisette, and presents a concavity towards the sea, so that this cape is the part of the coast nearest the Lérins Islands. The road to Italy and the railway run parallel to the shore as they traverse the city, and two miles beyond Cannes the two ways skirt the sea-side hemmed in between the hills of Vallauris on the one side, and the sea on the other. The highway leads to the Gulf of Juan (three miles), to Vallauris (four miles), to the town and cape of Antibes (six miles), to the valley of the Loup, to Biot and Villeneuve (eight or nine miles). By the railway, Var and Nice can be gained in less than an hour. The Bay of Villafranca and Saint-Hospice is distant from Nice only three or four miles.

3rd. On the north: we find successively the village of Cannet (distant three miles), the summit of the amphitheatre of hills protecting the canton of Cannes (two to four miles), the village of Vallauris lying behind the north-east portion of this amphitheatre (four miles), the highway from Grasse and the Alps, passing by Mougins, Mouans (five miles), and Saint-Vallier (eighteen miles).

4th. On the west: the high road for more than two miles is bordered by villas—as far as the plain of Laval; there we ought to take the way which, leaving the high road at right angles, runs northward to Pegomas and Auribeau (five miles), to join the road from Draguignan to Grasse near this last town (eight miles), and to reach Saint-Cézaire (seventeen miles) and its stalactite grottos. If, instead of going north, the high road is followed, we can traverse the whole breadth of the plain of Laval, leaving on the left the hermitage and the mount of Saint-Cassien (three miles), and cross the Siagne by a suspension bridge (four miles); after this point the landscape becomes grander and more severe. The ascent of the Esterel begins near the bifurcation of the road leading to Napoule (seven miles). We cross the rivulet Argentière, and finally ascending the mountains, gain the hostelry of the Esterel (ten miles), and from thence reach Fréjus; or we can leave the road at the summit of the ascent and either descend into one of the three valleys—Les Vaux, La Madeleine, or Le Reyran (thirteen miles), or continuing to ascend the wooded slopes of Mount Vinaigre, the highest

point of the range, enjoy a fine view of the surrounding country.

There is another way of reaching the Esterel, viz., by taking the railway which, passing over the plain of Laval, reaches broken ground as soon as the mountains are attained, where the road has been cut through the porphyritic mass, which extends as far as the sea and forms Cape Roux, the best rampart of Cannes against the Mistral. The first station of the railway is Trayas, the second Agay, and the third Saint-Raphaël, a little port of Fréjus. This journey is effected in an hour by rail.

Several of the sites I have just mentioned are easy of access and at such a distance that they can readily be made the object of a short promenade, but there are others more distant which require fatiguing excursions and take up the whole day.

Any of the following points can be visited in an afternoon:—

1st. Promenade of the boulevard and the Cape Croisette, church of Notre-Dame des pins.

2nd. Road to Antibes, Gulf of Juan, village of Vallauris, celebrated for its manufacture of pottery.

3rd. Town of Antibes and promenades on the cape.

4th. Boulevard du Cannet, village of Cannet, view from the square Bellevue, and return by the road to Grasse.

5th. Chapel of Saint-Antoine, admirable view on the Gulf of Napoule and the Bay of Nice, summit of the hills of Cannes, promenade around the great pine-tree.

6th. Village of Mougins, panorama of all the country, seen from the steeple of the church.

7th. The citadel and the forest of the island of Sainte-Marguerite.

8th. The monastery and island of Saint-Honorat.

9th. Excursion to the Croix des Gardes and to the pinewood situated north of Eleanor castle.

10th. The race-course, the Pinède, and the park de Fons-Michel.

11th. Hill and hermitage of Saint-Cassien, the suspension bridge over the river Siagne, the ruins of the castle of Napoule.

12th. The mills of Abbadie and the picturesque village of Auribeau.

13th. The city of Grasse, starting by Mouans and returning by Pegomas.

14th. The plain of Laval, village of Mandelieu, and returning by Pegomas.

Excursions demanding a day:—

15th. From Cannes to Antibes, returning by Mougins.

16th. From Cannes to Vallauris and Vallebonne, returning by Mougins.

17th. From Cannes to Vallauris and returning by Antibes.

18th. From Cannes to Grasse, Le Bar, and return by Vallebonne.

19th. Road from Cannes to Fréjus to the Relai de l'Esterel, ascent of Mount Vinaigre, or visit to the mines of Vaux and of the Madeleine (lignite and bituminous schist).

20th. The roadstead of Agay, the semaphore of Darmmond, the porphyry quarries of the Romans.

21st. The Roman ruins of Fréjus, the mine of Boson (bituminous schist).

22nd. The railway station of Trayas, the grotto "Sainte Baume," returning by Agay.

Excursions requiring one long day or two days:—

23rd. From Cannes to Cagnes, Vence, visiting the "Saut du Loup," returning by Le Bar and Grasse.

24th. Saint-Vallier and the "Pont à Dieu," natural bridge over the river Siagne.

25th. Saint-Cézaire, magnificent grottos of stalactites, the commencement of the Siagne canal.

26th. The perte de l'Argens, a river near the railway station of Vidauban.

I shall not speak here of the more distant excursions, such as Saint-Tropez, the Maures mountains, the abbey of La Verne, and in another direction the valley of Tinée, that of Vésubie, the baths of Berthemont and those of Saint-Dalmas.

This list is very incomplete, but it suffices to show that the country offers everywhere admirable sites, and in perusing it we soon become convinced that this little corner of the earth, already so favoured as regards climate by its geographical situation and the configuration of its mountains, is perhaps still more remarkable on account of its vegetation and the geological character of its soil.

VEGETATION.

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THE vegetation of a country is the surest criterion for appreciating its climate, at first sight and in a sufficiently exact manner. Now, it is impossible for the inhabitant of the North, arriving at Cannes, whether he turns his steps in the direction of the mountains of the Esterel, the hills of Cannet, the fields or gardens of Cannes, not to be struck with the immense difference which exists between the flora of this district and that of the rest of France.

The mountains of the Esterel are covered in the greatest part of their extent with forests of sea-pines and thickets of rock-roses, lentiscus, laurustines, arbutus, rush-brooms and arborescent heaths. These heaths are remarkably fine, attain a height of six or ten feet and flower in March, the laurustines in February and March; the rock-roses in March, April, and May; the rush-brooms in May and June; these



tufted groves extend to the Mediterranean, and afford delightful promenades. The sea-pines become rarely full-grown trees, because frequent fires devastate periodically the forests of the Esterel; during the summer it rains very seldom, so that the herbs and branches become so dry that the least spark suffices to ignite them. The most memorable of these fires occurred about twenty years ago; it lasted six weeks, and reduced to cinders the forests of Tanneron and Cape Roux; fortunately the mouldy earth renews itself easily wherever there is any schistose clay, and the pines, rock-roses, and heaths spring up rapidly in the soil.

The evergreen oak and especially the cork-tree are abundant in the mountains of the Esterel and the Maures; the cork-tree is very productive; a single proprietor told us that he realized in cork twenty thousand francs annually.

In the valleys are some pasture-lands and corn-fields; the same may be found in the environs of Adrets. The inn of the Esterel is surrounded by walnut, pear, and cherry-trees, and there is a magnificent forest of full-grown chestnut-trees at the foot of which strawberry plants grow.

Some miles farther, at Luc, the chestnut-trees form the object of an important commerce, their fruit known at Paris by the name of "marrons de Lyon," has an undisputed reputation of superiority.

The plain of Laval is covered with beautiful pasturages, so much the more valuable as plants fit for forage are rare in the South; the sandy soil of the shore nourishes superb umbrella pines which recall those in the vicinity of Rome and are often reproduced by painters in their pictures.

The hills of Cannes, Cannet, and Vallauris are clothed at their summits with pines of Aleppo, and at their bases with centenarian olive-trees which cover at least half of the tillable soil; the rest is occupied by cereals (in scanty crops and insufficient to support the population), vines, fig, almond, peach, jujube, orange, and lemon trees, and also odoriferous plants. The olives and pomegranates grow without cultivation.

The culture of vegetables, principally for an early market, assumes a great importance in the district of the Croisette; thus, in the months of December, January, and February, are raised in sheltered

positions, potatoes, green-peas, tomatoes, artichokes, &c.

The thousands of orange-trees which are cultivated on the territory of Cannet constitute the principal element of the wealth of this village. It is seldom that the thermometer descends low enough to injure the vegetation of the country. The winters noted as rigorous are those of the years 1709, 1716, 1789, 1820, 1828. In 1709 the orange-trees and a great number of the olive-trees perished, others were cut down and sprang up again; in 1716, the cold was less severe; in 1789, the olive-trees did not require cutting, but pruning; many orange-trees perished but not all; the winter of 1820 which was fatal to all Languedoc and a part of Provence did no harm to the olive-trees of Cannes, but necessitated the trimming of a certain number of orange-trees: as to the winter of 1828 it occasioned almost no damage. Since then the winters have injured only the sickly trees; those which are never watered suffer in summer; at the first rains of autumn the sap rises the earlier in proportion as they are less vigorous, and are thus in a bad condition to support a diminution of temperature.

The following are some examples of trees of fine growth, which I have noticed in my rambles: not one of them has any reputation in the country, and consequently they are not extraordinary specimens, viz: olive-tree, near the hamlet of Sainte-Catherine, circumference of the trunk, eleven feet—fig-tree, near the road conducting from Cannet to the highway of Grasse, circumference of the trunk, five feet—near by, *laurus nobilis*, circumference two feet and a-half, height about twenty-three feet—orange-tree, at the entrance of Cannet, circumference of the trunk, five feet; it resisted the winter of 1789; its trunk is hollow like those of the old chestnut-trees of the North—Orange-tree, near Notre-Dame-des-Anges; height of the trunk to the first branches, eight feet.

The orange-trees not only adorn the hills, they thrive even on the sea-shore; all strangers go to visit at the Croisette, the Garden of the Hesperides. It contains eleven hundred orange-trees producing sweet fruits of different kinds; nine hundred "chinois," one hundred and sixty lemon-trees, two hundred and fifty "mandariniers," twenty cedrats; all these trees are in full productiveness; there are besides ten or twelve thousand orange-trees in the

nursery-ground ; during the summer the trees are watered every twenty days ; that suffices to maintain them in all their vigour. "Nineteen years ago I created this garden," said its proprietor, M. Aune, to me, "and I have never lost a single tree by the cold."

Most of the orange-trees cultivated at Cannes and the gulf Juan are fine trees, whose fruit is bitter and cannot be eaten, but which furnish in abundance flowers destined to the manufacture of orange-flower water, which is forwarded in casks to all parts of the world.

The culture of odoriferous plants, and the commerce in the material used for perfumery, has a considerable importance at Grasse and Cannes ; a single perfumer of Grasse uses annually 160,000 pounds of orange-blossoms.

The roses, cassias, tuberoses, jasmines, violets, and orange-trees furnish the best materials of perfumery ; their flowers are made use of to perfume grease, and their essences to fabricate pomatum, the extracts being obtained by oils and alcohol. Merchants of all nations derive their supplies from this country. By manipulating and mixing several products to-

gether, they compose the perfumes met with in commerce under such various names.

The extraction of the essences by distillation constitutes another branch of industry; the following plants are employed for this purpose: oleander, orange-tree, rose, mint, rose-geranium, thyme, rosemary, lavender, aspic, anise and fennel. It requires over twenty pounds of orange-blossoms to obtain fifteen grains only of essence; the latter takes the name of "Neroly," and is employed especially for the fabrication of eau-de-Cologne. The merchants of the city of Cologne expend annually large sums on it.

The season of the principal harvest of flowers is the spring; the flowers are gathered every morning before the blossoms are completely expanded.

Of orange-flowers, over 1,600,000 pounds are gathered annually; of roses, over 500,000 pounds; of jasmines, 50,000; of violets, 80,000; of geraniums, 40,000, of tuberose, 50,000; of cassias, 50,000. This last plant, the cassia (*acacia farnesiana*) yields one of the choicest perfumes; it is sold at from two to four francs a pound; its culture

on a large scale, is carried on exclusively on the territory of Cannes, because this plant demands not only a warm climate but also a particular soil—the gneiss which we have seen composing the hills of Cannes along the coast; the district of “Californie” above the Croisette is almost entirely devoted to this culture.

During the winter, the country is as green as in summer, since the pines, olive-trees, and orange-trees occupy the largest part of its surface. At their feet one can, in every season, make an abundant collection of flowers, without speaking of those which are the object of a particular culture. In the months of February, March, and April a great number of the olive-groves are adorned with magnificent anemones of various colours; they are so numerous that a few moments suffice to gather a copious harvest of them.

I give here a list of plants found in the green- and hot-houses of the North which flourish in the open air at Cannes throughout the winter. The nomenclature was furnished by a skilful botanist who prefers to remain anonymous, but who possesses specimens of all these plants in his garden.

LIST OF PLANTS FLOURISHING AT CANNES IN  
THE OPEN AIR THROUGHOUT THE WINTER.

*Abutilon striatum*, HORT. And several species and varieties.

All the winter.

*Acacia cultriformis*, HOOK. March.

— *dealbata*, LINK. February.

— *Farnesiana*, WILLD. [Cassia.] Cultivated in fields.

November, December.

— *longifolia*, WILLD. February, March.

— *lophanta*, WILLD. December to February.

— *pycnantha*, BENTH. (Petiolaris, TEHN.) March.

— *retinodes*, SCHLECHT. All the winter.

— *Verticillata*, WILLD. March.

Etc., etc., etc.

*Adhadota vasica*, NEES. March.

*Agathæa amelloides*, D. C. [Cape cineraria.] All the winter.

*Ageratum cœruleum*, DESF. All the winter.

*Aloe arborescens*, MILL. February and March.

*Amicia Zygozeris*, D. C. December.

*Anagyris fœtida*, L. [Bois punais.] All the winter.

*Anemone coronaria*, L. and VAR. February and March.

— *pavonina*, L. and VAR. February and March.

*Antholyza æthiopica*, L., ETC. February and March.

*Aponogeton distachyus*, THUNB. All the winter.

*Arbutus Andrachne*, L. February.

— *Unedo*, L. (Arbutus). November.

*Banksia marcescens*, R. BR. February and March.

*Bougainvillea spectabilis*, WILLD. All the winter.

*Buddleia madagascariensis*, WALH. February and March.

*Calendula Officinalis*, L. [Souci des Jardins.] All the  
winter.

*Camellia japonica*, L. February and March.

*Cantua pyrifolia*, JUSS. All the winter.



- Cassia tomentosa*, L. All the winter.  
*Cestrum Aurantiacum*, LINDL. December.  
*Chrysanthemum Broussonettii*, BALB. All the winter.  
 ——— *fœniculaceum*, STEND. Id.  
 ——— *frutescens*, L. Id.  
*Chrysanthemum grandiflorum*, WILD. Id.  
 ——— *pumatifidum*, L. Id.  
*Clematis cirrhosa*, L. January.  
*Cobæa Scandens*, CAV. All the winter.  
*Colletia Spinosa*, LAM. December and March.  
*Coronilla pentaphylla*, DESF. February.  
 ——— *valentina*, L. March.  
*Correa Alba*, ANDR. All the winter.  
 ——— *bicolor*, PAXT., ETC. Id.  
*Cuphea eminens*, P. L. and LINDL. December.  
*Cyclamen persicum*, MILL. February and March.  
*Datura suaveolens*, H. and B. November and December.  
*Dolichos lignosus*, HORT. Winter.  
*Erica Mediterranea*, L. [Heath.] January and March.  
*Eriobotrya japoconia*, L. [Japanese medlar.] November  
 and December.  
*Eriocephalus africanus*, L. December and February.  
*Escallonia rubra*, PERS. December and February.  
*Eucalyptus Globulus*, LA BILL. December to February.  
*Eupatorium fruticosum*, DESF. December and January.  
 ——— *Morisi*, VIS. December to February.  
 Etc., etc., etc.  
*Euryops virgineus*, D. C. February and March.  
*Freylinia cestroides*, COLLA. December to February.  
*Gazania speciosa*, LESS. March and April.  
*Gomphocarpus arborescens*, R. BR. December and February.  
*Grevillea Glabrata*, MEISN. February and March.  
 ——— *Thelemanniana*, HUG. January and March.  
 Etc., etc., etc.

- Halrothamnus elegans*, BRONGN. All the winter.  
 — *fasciculatus*, NEES. Id.
- Hardenbergia ovata*, BENTH. February and March.
- Heliotropium peruvianum*, L. (Héliotrope.) All the winter.
- Hermannia denudata*, L. F. And many other species. March.
- Hexacentris coccinea*, NEES. December and January.
- Iberis semperflorens*, L. [Thlaspi vivace.] All the winter.
- Iris alata*, LAM. December and January.  
 — *persica*, L. February.  
 — *unquicularis*, POIR, ETC. December to February.
- Jasminium nudiflorum*, LINDL. [Jasmine.] January and  
 February.
- Lantana Camara*, L. and VAR. December and January.  
 — *Sellowii*, LINK. Id.
- Lavandula dentata*, L. [Lavender.] December and January.  
 — *Multifida*, L. All the winter.
- Linum trigynum*, ROXB. December and January.
- Læsilia coccinea*, DON. December, January.
- Lonicera fragrantissima*, HORT. [Honeysuckle.] January  
 to March.
- Lotus Jacobeus*, L. All the winter.
- Malcolmia maritima*, R. BR. [Gilliflower of Mahon.] March.
- Malvaviscus mollis*, D. C. December.
- Matthiola annua*, SWEET. [Garden gilliflower.] All the  
 winter.  
 — *græca*, SWEET. Id., id.  
 — *incana*, R. BR. Id., id.
- Medicago arborea*, L. [Tree Lucerne.] March.
- Melianthus minor*, L. March.
- Mesenbrianthemum serrulatum*, HAW. [Ficoïdes.] January  
 and February.  
 — *uncatum*, SALN. All the winter.  
 Etc., etc., etc.
- Narcissus multiflorus*, HAW. and VAR. Dec. and Jan.

*Narcissus Junquilla*, L. [Jonquil.] Flor. pl. March.

— *papyraceus*, GAWL. All the winter.

Etc., etc., etc.

*Nicotiana Glauca*, GRAH. [Tree tobacco.] All the winter.

*Osteospermum moniliferum*, L. February and March.

*Oxalis purpurea*, JACQ., and several species. January and March.

*Pelargonium inquinans*, AIT. and VAR. All the winter.

*Plumbago capensis*, THUNB. December.

*Peristrophe speciosa*, NEES. February and March.

*Petunia violacea*, HOOK. February and March.

*Polygala oppositifolia*, L. All the winter.

*Psiadia glutinosa*, JACQ. December and January.

*Raphiolepis salicifolia*, LINDL. February and March.

*Rose Banksa*. February and March.

— *bengali*, common. All the winter.

— *bengali*, purple. Id.

— *chromatella*. Id.

— *gloire des rosomanes*. Id.

— *noisette Lamarque*. Id.

— *thé safrano*. Id.

Etc., etc., etc.

*Rosmarinus officinalis*, L. [Rosemary.] All the winter.

*Salvia confertiflora*, POHL. [Sage.] December.

— *fulgens*, CAV. Id.

— *gesneriæflora*, HORT. February and March.

— *Heerii*, REGEL. December and February.

— *Involucrata*, CAV. November and December.

— *janthina*, OTT. and DIETR. December, March.

— *Leucantha*, CAV. December to January.

— *longistyla*, BENTH. December to February.

— *Mexicana*, L. December.

— *polystachya*, HORT. Id.

— *princeps*, HORT. December to February.

Etc., etc., etc.

- Saxifraga crassifolia*, L. January and February.
- Senecio mikaniæformis*, D. C. [Summer Ivy.]. December and February.
- *Petasites*, D. C. (*Cineraria platanifolia*. SCHR.) February and March.
- Sida arborea*, L. F. All the winter.
- Siphocampylus bicolor*, DON. December.
- Solanum jasminoides*, PAXT. All the winter.
- Sparmannia africana*, L. Id.
- Stapelia grandiflora*, MASS. December.
- Tacsonia manicata*, JUSS. All the winter.
- Tecoma capensis*, LINDL. December.
- Templetonia retusa*, R. BR. March.
- Teucrium fruticans*, L. All the winter.
- Triteleia uniflora*, LINDL. March.
- Tritoma Burchelli*, SWEET. All the winter.
- Tropæolum*, HOOK. [Capucine.] All the winter.
- Tulipa suaveolens*, ROTH. February and March.
- Veronica Andersoni*, HORT. and VAR. All the winter.
- Viburnum suspensum*, HORT. February and March.
- *Tinus*, L. [Laurier-Tin.] All the winter.
- Vinca major*, L. [Periwinkle.] February and March.
- Violettes*. January and March.
- Wigandia macrophylla*, SCHLECHT. March.

Since the nature of the soil exercises a great influence on the salubrity of a country, I have made some researches into the geological structure of the environs of Cannes. I had intended to pass rapidly over this subject, and to occupy myself very cursorily with it, in so much as this branch of

## METEOROLOGY.

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METEOROLOGY is an entirely modern science ; Humboldt, at the beginning of this century, was the first who drew up a chart indicating the distribution of temperatures on the surface of the globe ; more recently Maury has drawn the attention of scholars and navigators by his interesting discoveries to the general direction of the winds ; he has considerably diminished, for sailing vessels, the duration of the time necessary to accomplish long voyages, by indicating to them the itineraries to be followed, in order to avail themselves of the favourable winds.

The observatories of Paris, London, and Washington uniting their efforts with a view to continue the researches of Maury, have undertaken the centralization of the documents proper for establishing a chart of winds and for discovering certain

bases calculated to aid the prevision of atmospheric phenomena. A meteorologic system has been also established in Prussia under the direction of M. Dove; another exists in Switzerland; the latter furnishes documents so much the more curious, as in that country of mountains the observatories exhibit in their situations a difference in altitude of more than 7,000 feet. All these works, executed by competent men, are destined to place meteorology on a solid foundation, and to render the greatest services to medicine, because they will enable us to appreciate in a precise manner the influence that atmospheric perturbations exert on the health.

This study is particularly interesting at the winter stations, since there, more than anywhere else, are found assembled a great number of invalids seeking in the best climatic conditions, the cure of their maladies. Some well-made meteorologic observations are required to enhance the value of each of these stations, and furnish us with the means of comparing them with one another. Climatology has for the physician a primary importance; it aids him in determining rationally the

sort of life patients should adopt, so as to prevent complications and recover health.

It is indispensable for consumptive persons and those affected with rheumatism, to breathe a pure air, to live in the sun and to be protected from cold and humidity. At Cannes, more than anywhere else, these conditions are found united, but we must admit that, while the climate at least presents on the one hand inestimable qualities which particularly characterize it, on the other hand there are some important dangers to be avoided. Now, to avoid these dangers the invalids must be forewarned so as not to perceive too late the inconveniences inherent on a sudden change of temperature between the shade and the sun, and on the dry or humid character of such or such winds.

I have published the results of my observations in fuller detail than I have been able to accomplish in this short notice; the subject is, however, of too much importance to be passed over in silence. During the last eight years I have collected and noted daily observations concerning the temperature, state of the sky, quantity of rain, direction of the wind, and the hygrometrical state

of the air. These subjects are indispensable for the guidance of invalids, and to put them in the way of getting all the benefit the climate affords without any of its disadvantages. I beg the reader, before going further, to cast his eye over the meteorological diagrams to be found at the end of this volume, so as to get a clear idea of their principal features. These diagrams are six in number; each one indicates the temperature, state of the sky, and quantity of rain fallen during the season from November to April at Cannes and in another town, taken as a comparison. The two curved continuous lines indicate the daily temperature of Cannes. The upper line signifies the temperature of the day; the lower, that of the night. It is easy to read the degrees by means of the scale placed to the left of the diagram. They can be read according to the three systems of Centigrade, Fahrenheit, or Reaumur. The two curved dotted lines furnish the same indications for the town which I have chosen as a comparison. I have taken Paris for three years, London, Geneva, and Munich each for one season. The little squares, black or blue, placed at the top of the picture, correspond to the state



of the sky at Cannes; those beneath relate to the town used for comparison. Four blue squares indicate continuous fine weather, four black squares a cloudy sky, when the sun has not appeared. One black square and three blues mean a moderately fine day, the sun having been hid only now and then by the clouds, &c. Again, those lines which are thick, straight, and vertical, mark, according to their length, the rain which has fallen. The ladder to the right of the picture enables us to see the quantity of water either in millimetres or English inches. From these observations one can draw the following conclusions:—

TEMPERATURE.—The temperature of Cannes during the day is always higher than freezing point. That of the night may fall below; but from the instant of sunrise the thermometer ascends. There has never been an example known, where the thermometer has remained for twenty-four consecutive hours at freezing point. The variations of temperature at Cannes in one day, are much less accentuated than in the North, and this is of importance to invalids. One of the features worthy of notice about

Cannes is, that the ascent of the temperature in spring, is regular. At the end of the winter season in the North, there are always some days either very cold or very hot each year, and especially in April. These days are warmer than in the South (look at the diagram), but then the cold returns, which is so dangerous to the invalids, and is the period of the year which has the largest mortality in the North. We beg those who are delicate, not to leave the South too precipitately because they hear of some warm days in the North. Nothing is more dangerous than these sudden departures.

I advise the consumptive patient, whose stay in the South cannot be of long duration, to come late and to leave late, rather than come early and leave too early in the season. In looking at the charts it is notable that the difference between the temperature of the day and night is greater at Cannes than in the North, and that is partly the consequence of the clearness of the sky. When the clouds envelope the earth as with a covering, the sun's rays give but little warmth to the surface of the soil, whilst on the other hand they possess great activity under a cloudless sky;

but, during the night, the temperature of the ground diminishes rapidly, under the influence of radiation. It is thus that in the tropical climate of India the nights are sometimes cold enough to produce a momentary freezing of the soil. The same cause explains the production of an abundant fall of dew during the twilight. This cold is without danger for those invalids dwelling in well-built houses. It is thus understood, why we ask invalids to return home before sunset, to shut their windows partly from that moment, and not to open them in the morning before the rays of the sun are powerful enough to dispel the damp of the night. The temperature indicated in the chart was observed in the shade. If a thermometer is exposed to the sun, the temperature rises much higher, and amounts to 100 or even 110 degrees of Fahrenheit at the time of the Christmas holidays. I have made several series of experiments to calculate the quantity of water condensed by the dew, and the difference in the hygrometrical state of the atmosphere before and after sunset. This problem, so delicate in its details, gives rise to so many special considerations which cannot be discussed here.

THE WINDS.—Now let us turn to consider the character of the principal winds that prevail in the territory of Cannes. The north wind blows very frequently; it nearly always brings fine weather and clears the sky. We need not fear this wind, because the protection afforded by the mountains and hills in this direction, is so complete that the column of air coming from the north passes at a height above the shore of Cannes. As the sky is clear and bright at the same time, the sun exercises all its influence without impediment. The atmosphere itself has a low or high temperature as the case may be, but the solar rays are extremely hot, and to this may be assigned our agreeable sensations. The aërial current is often somewhat cold in winter in the higher regions of the atmosphere. It strikes the sea at about six kilometres from the shore, so that the sea at Cannes is perfectly calm, whilst, with the aid of a glass, waves can easily be distinguished in the distance and the vessels scudding before the wind with their sails half-furled. In summer, the *brise de terre* comes from the north; it blows during the night, and cools the atmosphere. The north-east wind (tramountane) is inoffensive when it does not blow

strong, but when it gathers force it is cold, and disagreeable in winter, because it comes from the plains of Hungary. The screen of hills and mountains which shelter Cannes is less complete on this side than that on the north. When snow falls at Cannes, which it does about once in three years, this phenomenon is produced under the influence of the north-east wind. This wind should be avoided by invalids, who should take their walks by the side of those hills which are completely sheltered, or else not go out at all whilst it lasts. Fortunately, this wind does not generally last long in great force, but oftener is replaced by the north wind. The east wind (levante) is not very cutting. It is much less cold than the north-east wind, and often brings clouds with it, which dissolve into rain if the temperature falls. This wind oftener changes to south-east. The south-east wind (marine), which comes from the Gulf of Genoa, is the wind bringing rain of long duration. It is almost the only one under whose influence, the sky gets a uniform grey colour. This wind is not sharp, because, notwithstanding the rain it brings, it does not hurt invalids. But if the wind changes to the north-east, the tem-

perature falls, and the rain itself becomes colder. The weathercock often changes in the morning until eleven or twelve o'clock to the south-east, the sky nevertheless being perfectly clear. The truth is, the winds must not be confounded with the sea breeze. This blows in the morning in the direction of south-east or south, whilst in the afternoon it turns to south-west. The sea breeze is a current of air limited to a very narrow space. It does not take place except during fine weather, brings a hot air, a little damp, but not vaporous; its influence is not felt for more than about one kilometre from the shore. The south wind (sirocco) is sometimes violent. It is, of all the winds that blow, the rarest. It retains, notwithstanding its passage over the Mediterranean, some of its characteristics of extreme dryness, both hot and overpowering, as is well known in the South of Italy and specially in Africa. In winter it loses this characteristic, but it stirs the waves until it deviates towards the south or south-west; it is the only one which can produce waves in the Gulf of Cannes, so well-protected is it on all sides. The waves when so produced are sometimes tremendous in size. This wind raises a spray on the

surface of the water, so that walking on the shore we can breathe salt air, excellent for lymphatic infants, for chlorotic girls, and weak people, but pernicious to the consumptive. This effect of the south wind is limited to the shore alone. Before reaching the hills the air is deprived of every particle of salt, which cannot rise on account of its weight, and is stopped by the first obstacles which present themselves in the shape of trees or houses. The south-west wind is very variable in its effects, sometimes it is damp, bringing large clouds which disperse themselves in heavy rains, but lasting a short time only, to give place to sunshine. Sometimes (and then this wind is more west-south-west), it is somewhat dry and blows in gusts. I think in this case it must be attributed to the Mistral, which not having force enough to pass over the Esterel, makes a *détour* and comes to us, having lost a little of its dryness and velocity during its passage over a small stretch of sea. The Mistral, when it does happen to reach Cannes, comes in a direction varying from west-south-west to west and to north-west. Its habitual direction is west-north-west. I have already said that it rarely blows in that part of Provence in proximity to the mountains of Maures and

Esterel. When it exercises its influence on the valley of the Rhone we have either a complete calm at Cannes (in this case the sea breeze or a gentle north wind prevails), or else south-east wind at the end of a hurricane, or the west-south-west, a mild and moderately dry wind.

It is seldom till March that the Mistral is strong enough to reach us over the Esterel, being rendered weaker from the obstacles which it has had to surmount. This wind is very dry. Its approach is predicted by a fall of the barometer and a diminution of the water-mist in the air. The sky is cloudless; the sun shines. The Mistral generally blows during two or three days, from six o'clock in the morning until sunset. Sometimes it begins during the night, but generally it exhausts its violence in the morning. It dries the roads very rapidly, which has given it the common name of the "broom of the South."

HYGROMETRY.—The climate of Cannes should be counted among the dry climates by reason of the few rainy days there. Nevertheless, the quantity of watery mist contained in the air is more than that found in certain damp countries. This phenomenon may be partly attributed to its proximity



to the sea, and partly to the power of the sun, which prevents the watery mist from changing into fog. Consequently the atmosphere of Cannes possesses enough moisture, without containing those particles of dampness, the absorption of which is so dangerous to the phthisical.

The air at Cannes possesses a relative moisture, which varies between 57 and 69 to 100. This proportion is sufficient to keep the atmosphere generally transparent, without having dryness as a characteristic, which provokes a pulmonary evaporation, and too abundant perspiration.

But when the Mistral blows, the air is very dry, and the relative dampness can fall from 22 to 100. We have noticed before that invalids would do well to have a basin of boiling water in their rooms, letting out the steam. From the moment that the Mistral gives place to the south-west wind, the dampness of the air returns to its habitual proportion.

RAIN, AND STATE OF THE SKY.—The rules for the rains on the side of Provence, but principally on the territory of Cannes, are very remarkable. They can be thus recapitulated:—

1st. Rare but abundant rains give considerable quantities of water in a short time.

2nd. The sky is usually serene.

3rd. There is *never any fog*. I underline these last words because the absence of a damp cold fog, from which consumptives suffer so much in the North, is a chief point.

My observations on the rain are subject to some interruptions in the summer season. I cannot therefore give the exact number of rainy days during the whole year at present. However, I am certain that I am not far from the truth in giving seventy as the number of the days when it rains at Cannes, whilst there are annually 140 rainy days at Paris, 178 at London, and 206 at Edinburgh; and further, it often happens at Cannes that after a shower, which does not last more than a few minutes, the sun shines and disperses, quickly with its rays, the damp from the ground. The quantity of water falling annually is more considerable at Cannes than at Paris, because instead of the fine rain which disperses with fogs which lasts days and weeks, only giving 1 or 2 millimetres, heavy rain falls in the South, bringing 20 to 60 millimetres of water in a few hours, and even 112 millimetres, as I have

had occasion to note down, so that annually about 900 millimetres of water fall at Cannes. There is generally a month in spring, and another in autumn, during which the rains are frequent and abundant, whilst in winter they are rarer, and in summer there is nearly complete and absolute dryness.

In a word, the winter climate of Cannes is remarkable—

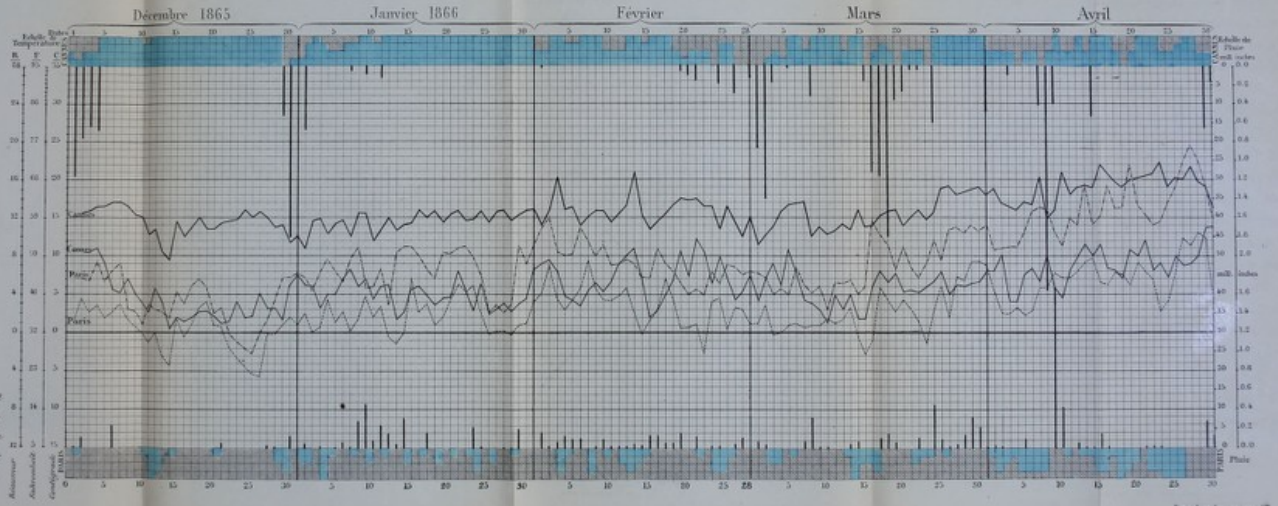
1st. By reason of the elevation and regularity of the temperature at the hour of the patient's promenade. 2nd. By reason of the clearness of the atmosphere and the abundance of the light. 3rd. By the power of the sun's rays. 4th. By the rarity of the rain. 5th. By the absence of cold humidity and fogs.

The structure of the soil and the vegetation present arguments inapplicable to our theme. Knowing the wind, the transition from the shade to the sun, and this dampness at the moment of sunset, it is easy to avoid these harmful effects, and to find under this fair sky, the most favourable conditions both for the hygiene and the health.

TABLE I. — TEMPÉRATURES MINIMA ET MAXIMA — ÉTAT DU CIEL — PLUIE — Observations recueillies à PARIS (Observatoire Impérial) et à CANNES (D<sup>e</sup> de Valcourt) 1865-66  
 TEMPERATURE — STATE OF THE SKY — RAIN — TEMPERATUR — ZUSTAND DES HIMMELS — REGEN

**Explication**  
 ———— Maxima Cannes  
 ———— Minima Cannes  
 ———— Maxima Paris  
 ———— Minima Paris  
 C Thermomètre Centigrade  
 F ———— id. ———— Fahrenheit  
 R ———— id. ———— Réaumur  
 mm. Millimètres  
 inch. English inches  
 | Pluie, pluie, Regen  
 ☁ Ciel couvert, Cloudy, Wolkig  
 ☀ Soleil, Sun, Sonne

*Les indications concernant le plus et l'état du ciel, sont indiquées pour Cannes en haut, pour Paris en bas du tableau.*  
*The relative degree of obscurity and the quantity of rain, at Cannes and at Paris are shown at the top and bottom of the table. Sun, clouds and signs, and for Cannes, also for Paris, under glass-hour.*



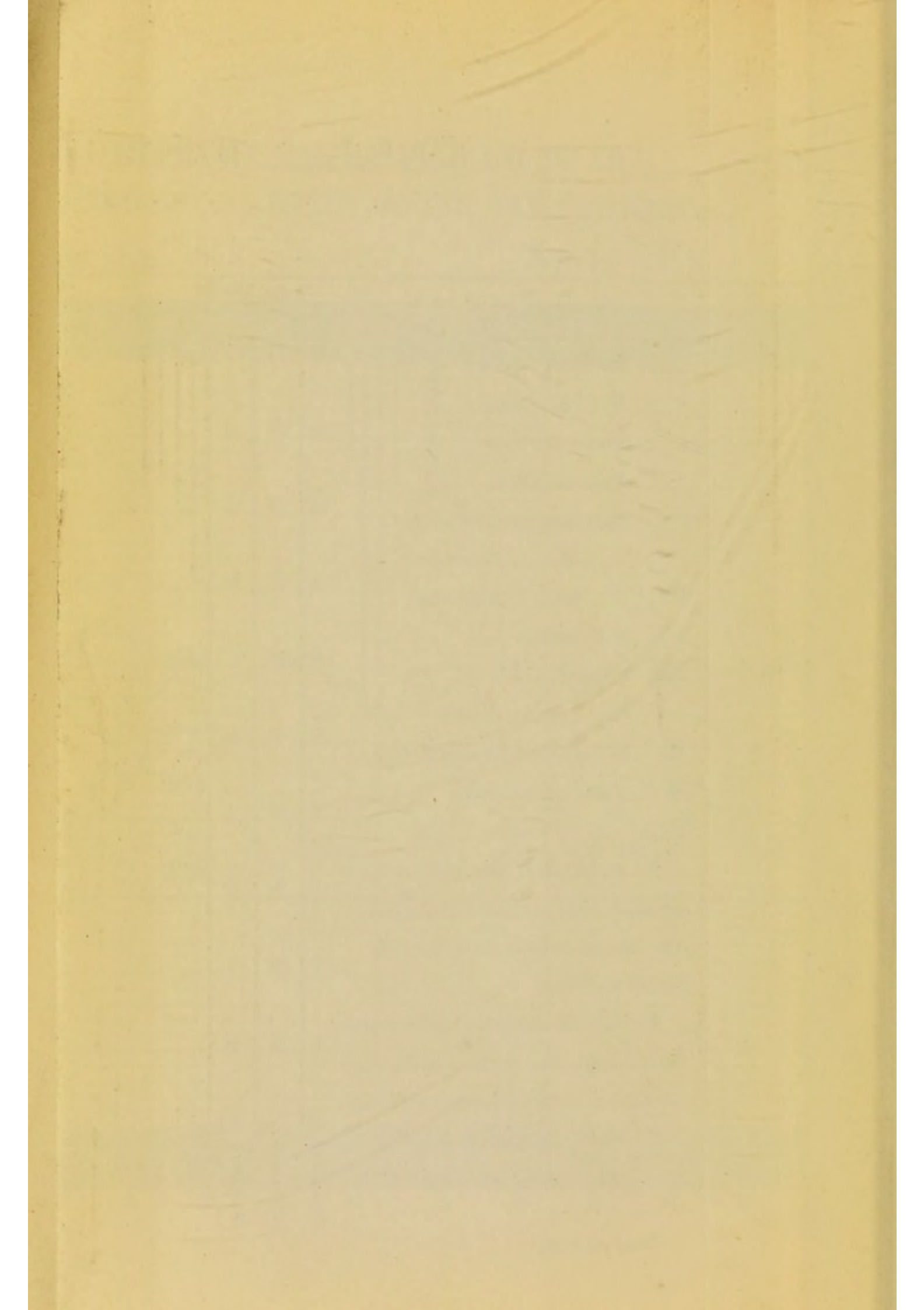
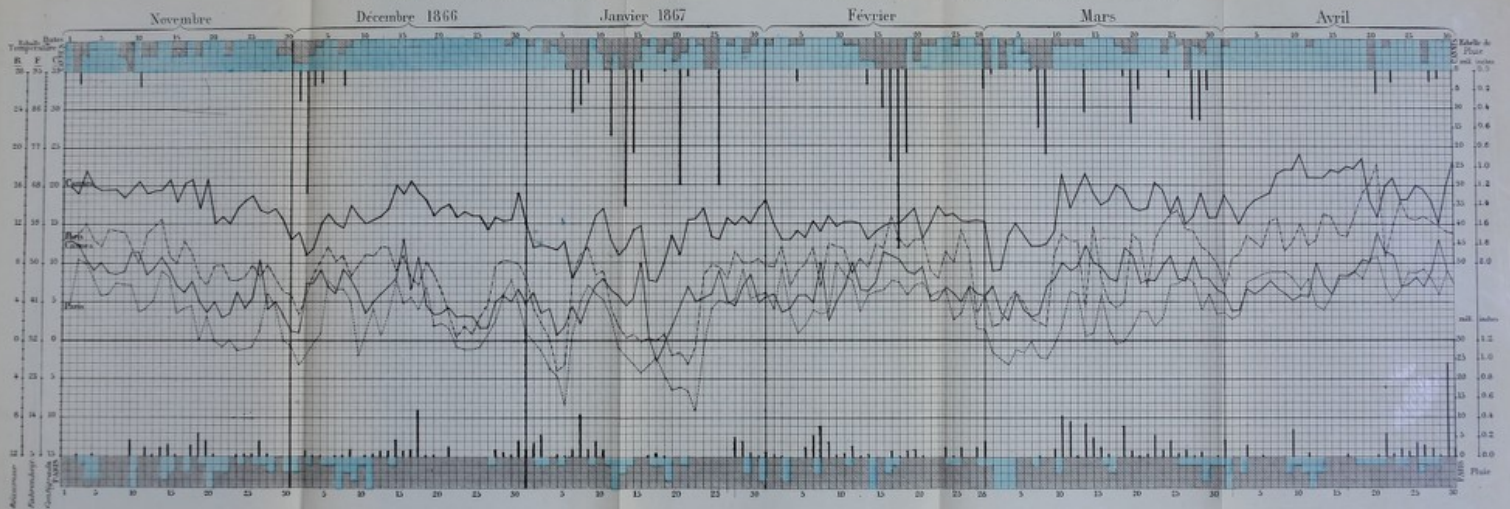


TABLE 2 TEMPERATURES MINIMA ET MAXIMA — ÉTAT DU CIEL — PLUIE — Observations recueillies à PARIS (Observatoire Impérial) et à CANNES (D<sup>e</sup> Valcourt) 1866-67  
 TEMPERATURE — STATE OF THE SKY — RAIN — TEMPERATUR — ZUSTAND DES HIMMELS — REGEN



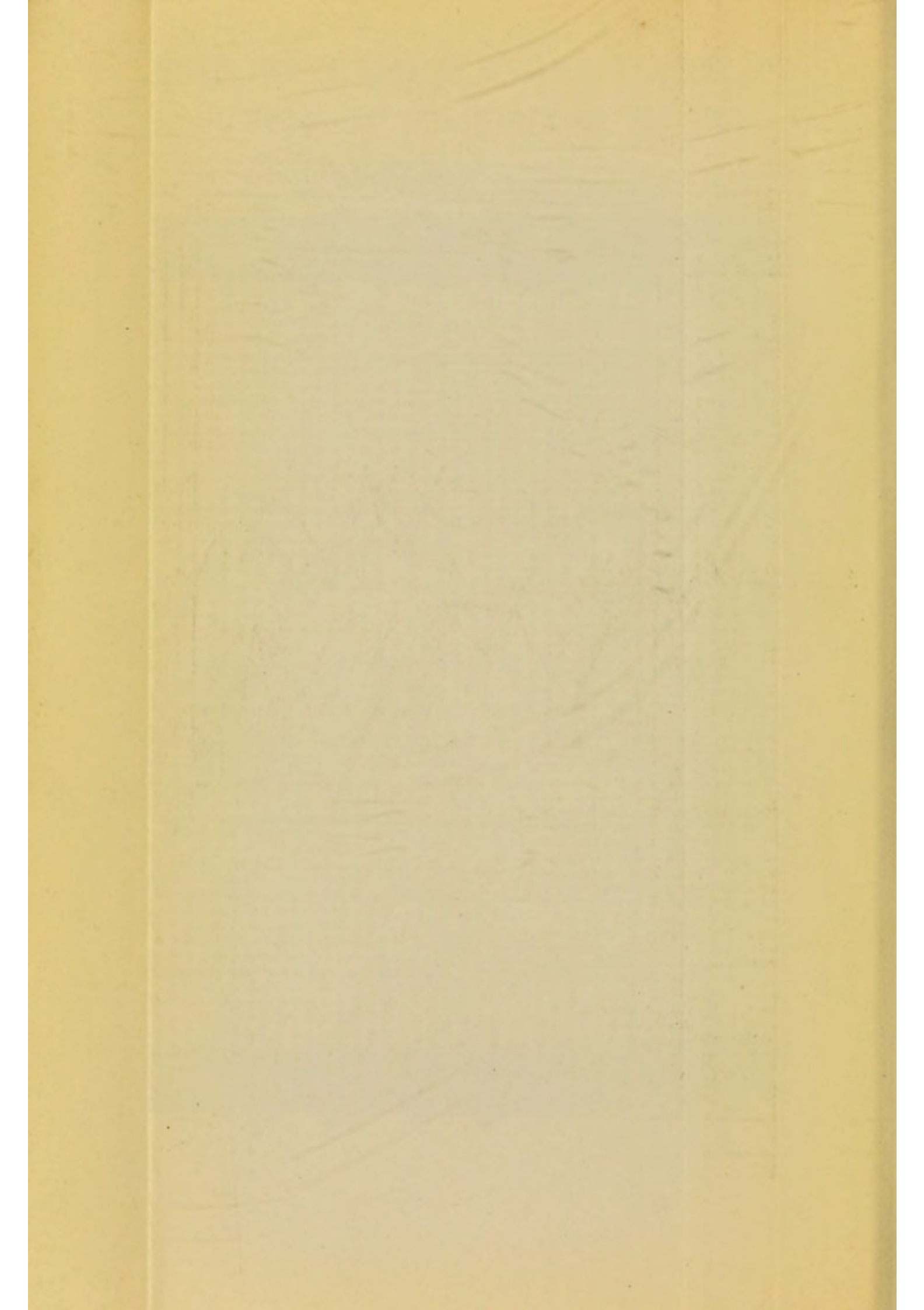
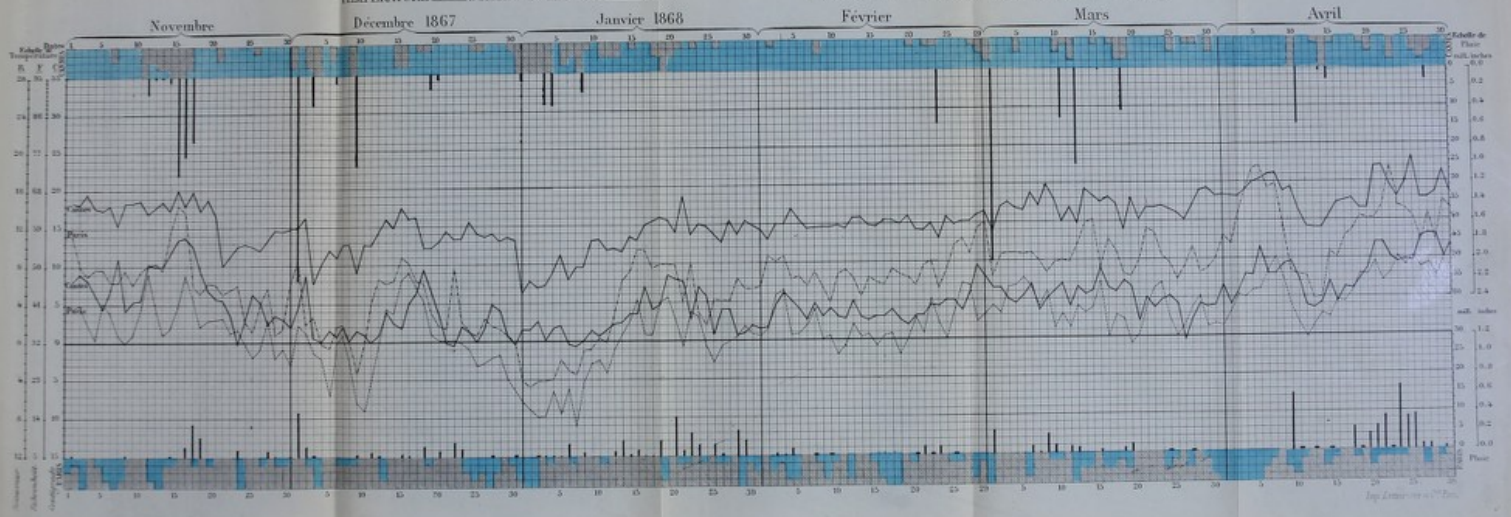


TABLE 3 — TEMPÉRATURES MINIMA ET MAXIMA — ÉTAT DU CIEL — PLUIE — Observations recueillies à PARIS (Observatoire Impérial) et à CANNES (D<sup>e</sup> de Valcourt) 1867-68  
 TEMPERATURE — STATE OF THE SKY — RAIN — TEMPERATUR — ZUSTAND DES HIMMELS — REGEN





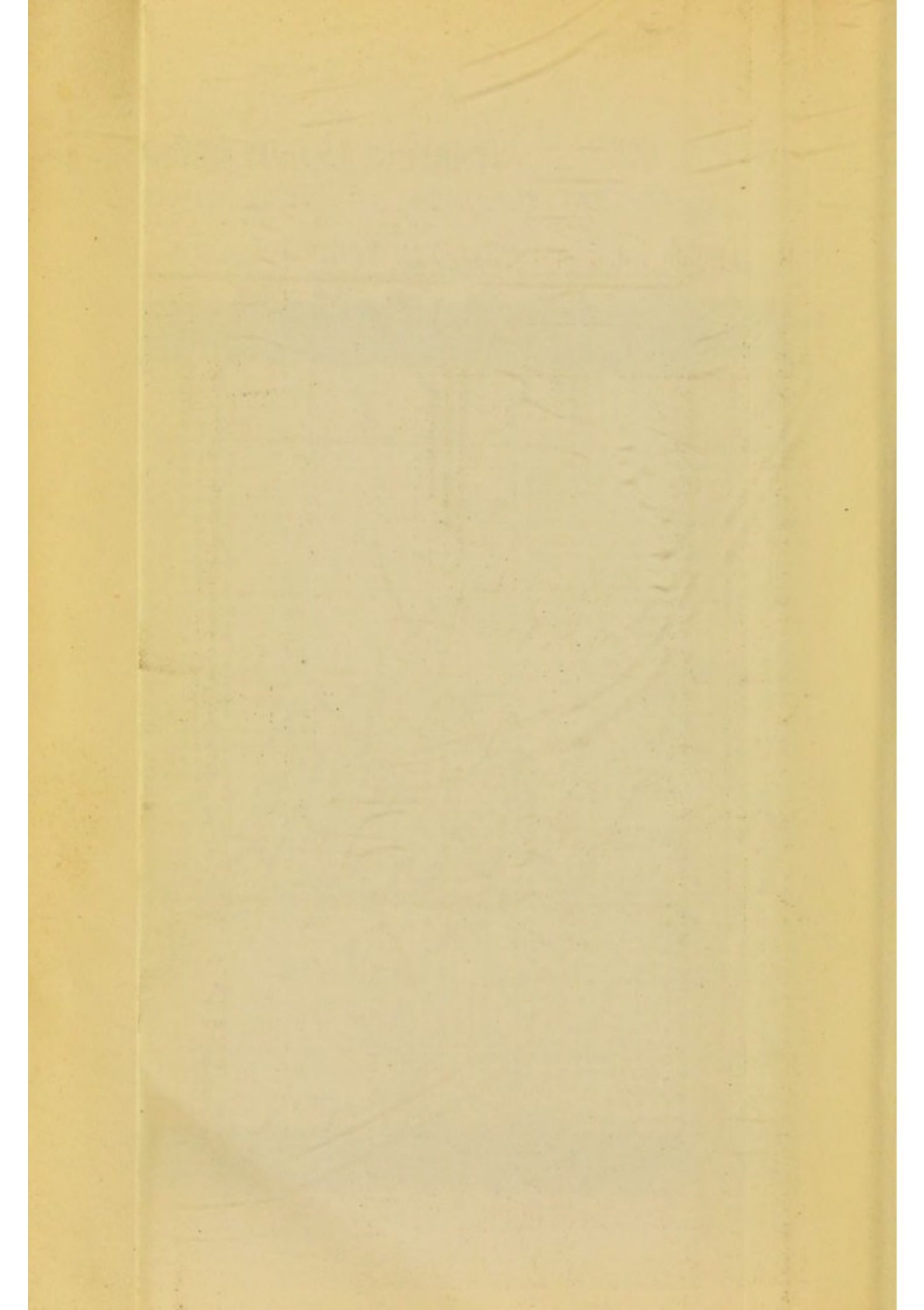
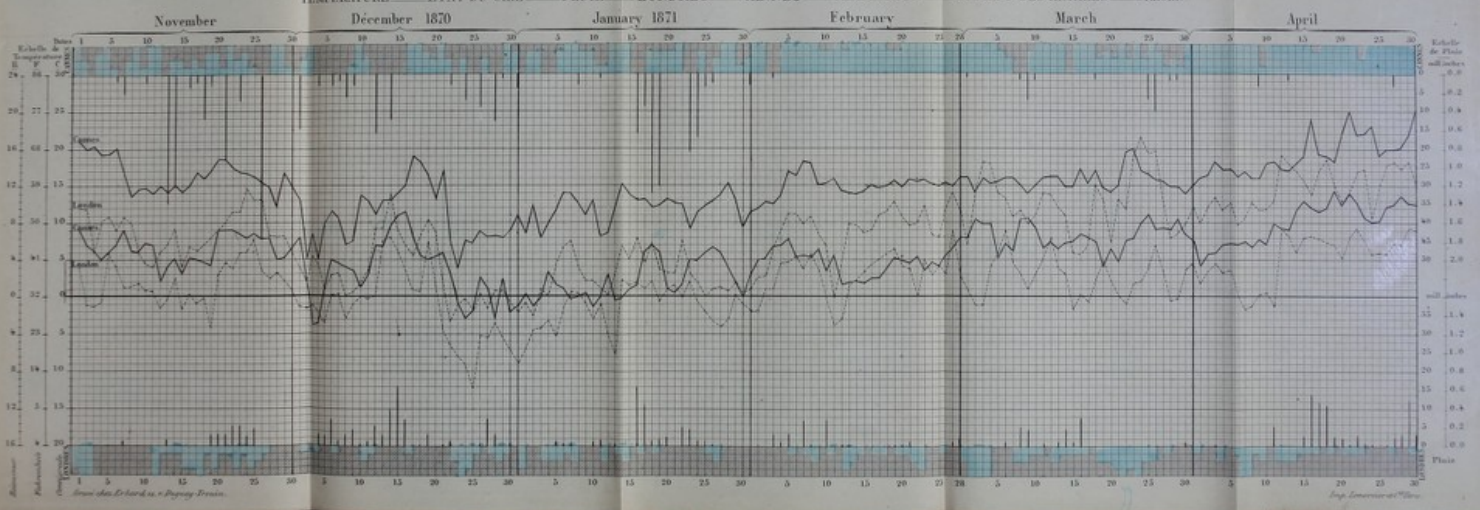


TABLE 4. TEMPERATURE MINIMA AND MAXIMA STATE OF THE SKY RAIN Meteorological Observations LONDON (Royal Observatory, Greenwich) and CANNES (D<sup>e</sup> de Valcourt) 1870-71.



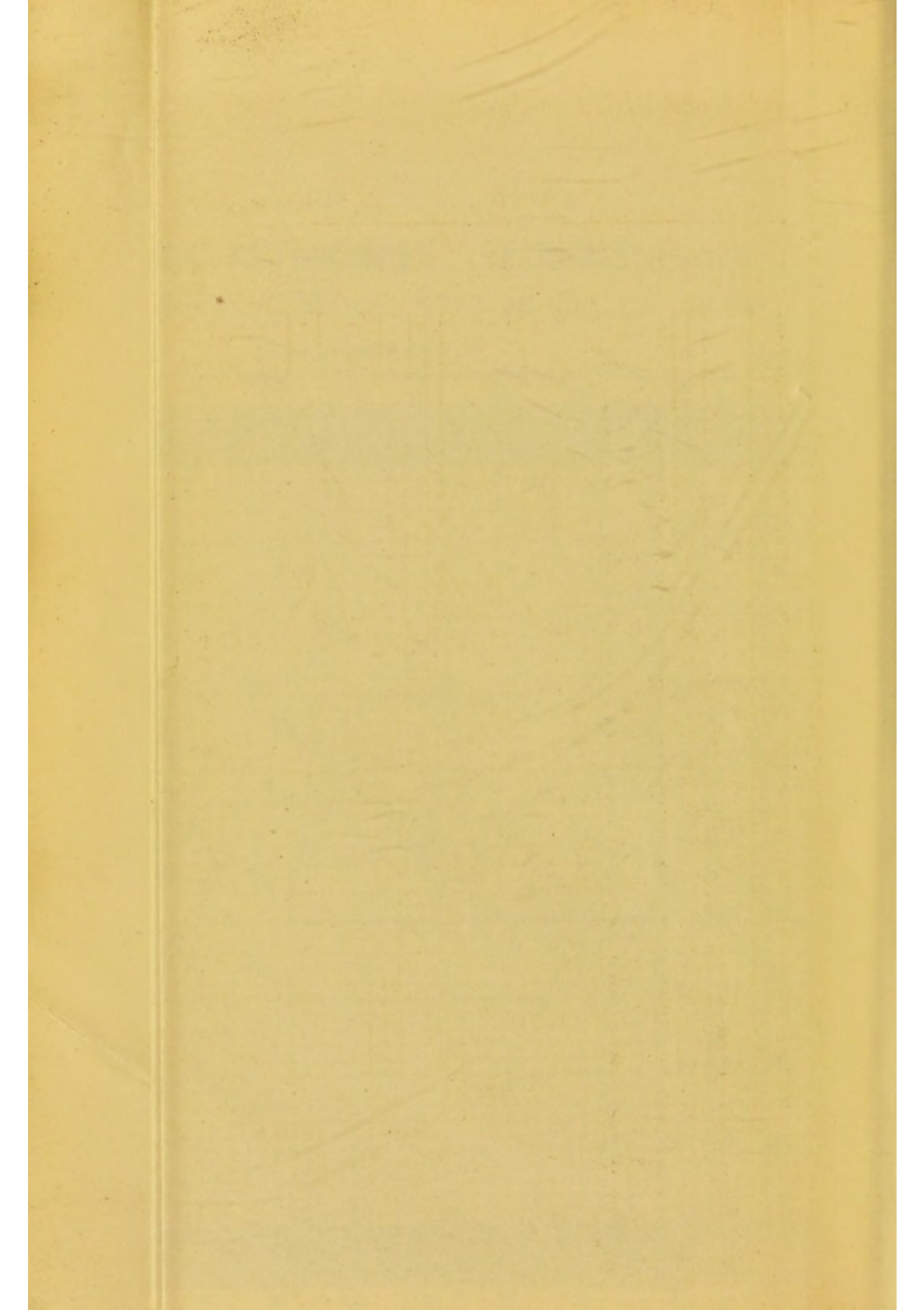
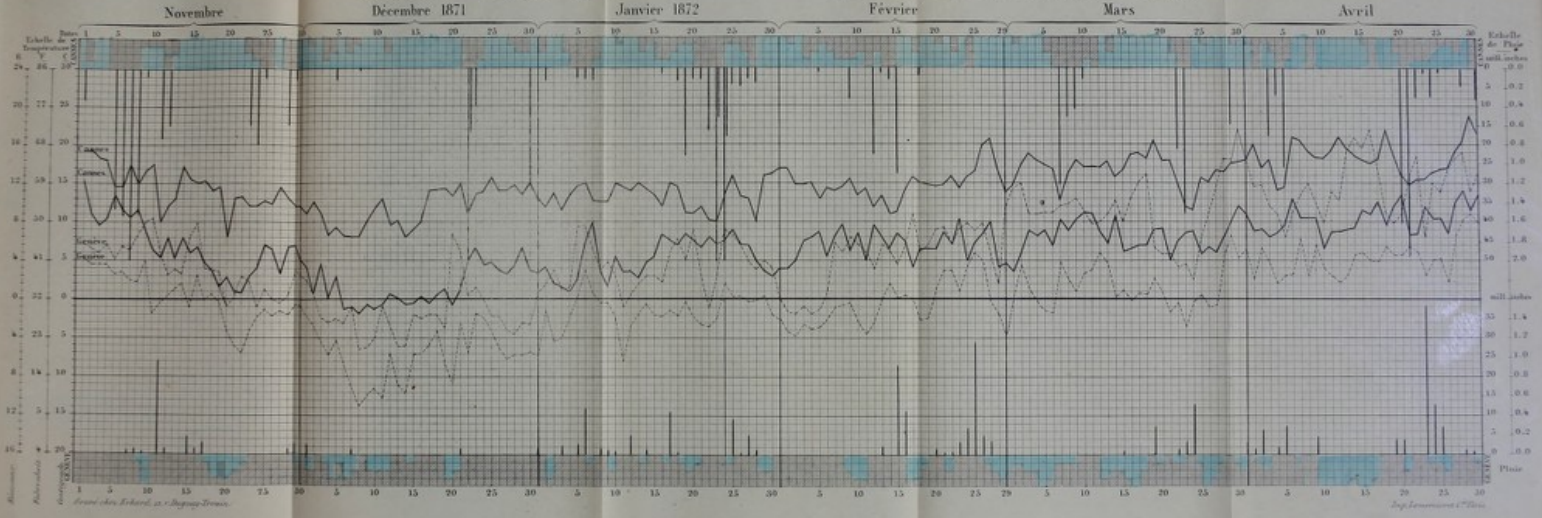


TABLE 5 — TEMPERATURES MINIMA ET MAXIMA — ETAT DU CIEL — PLUIE — Observations recueillies à GENÈVE (M. Plantamour) et à CANNES (D<sup>e</sup> de Valenciennes) 1871 - 72.



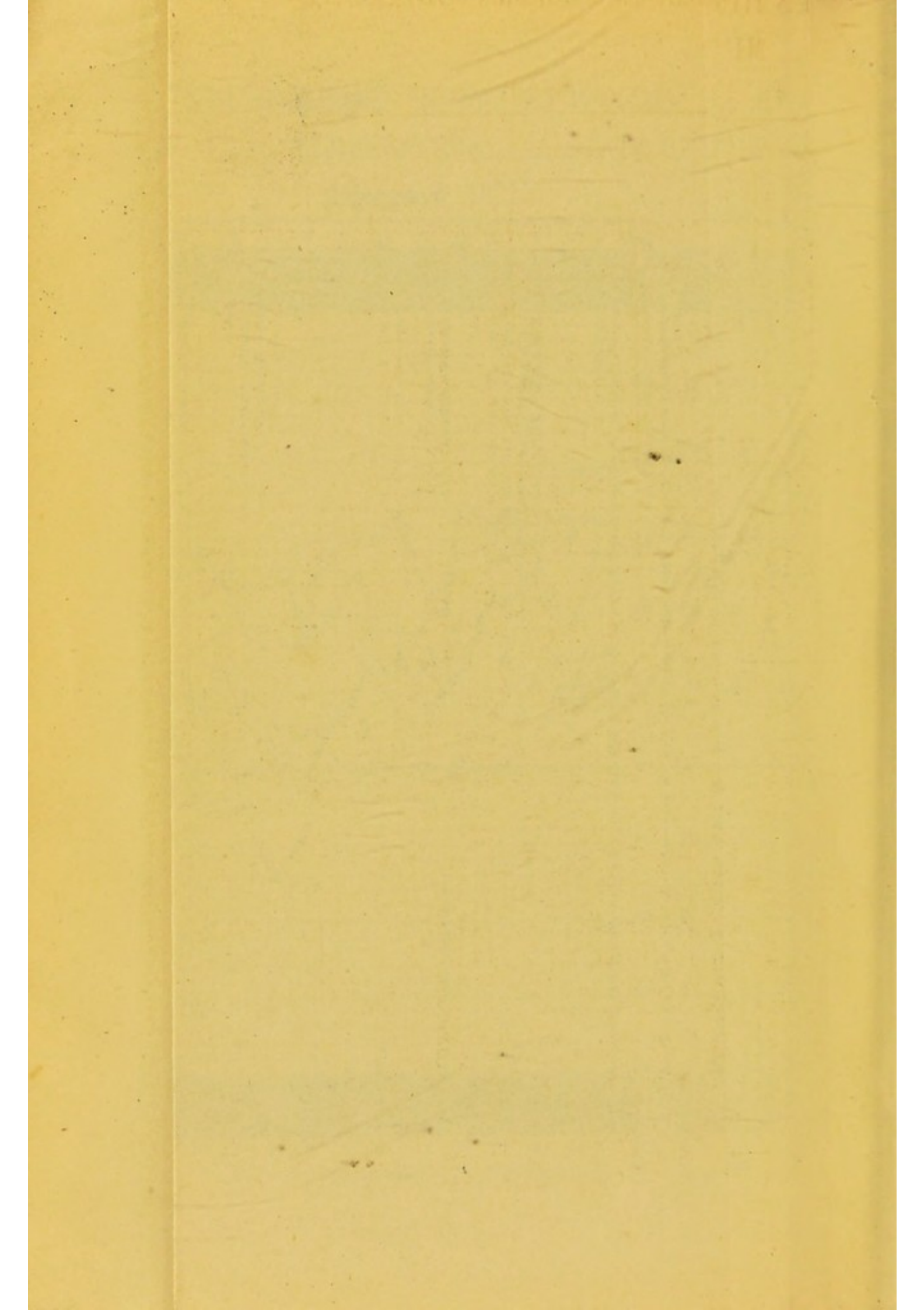
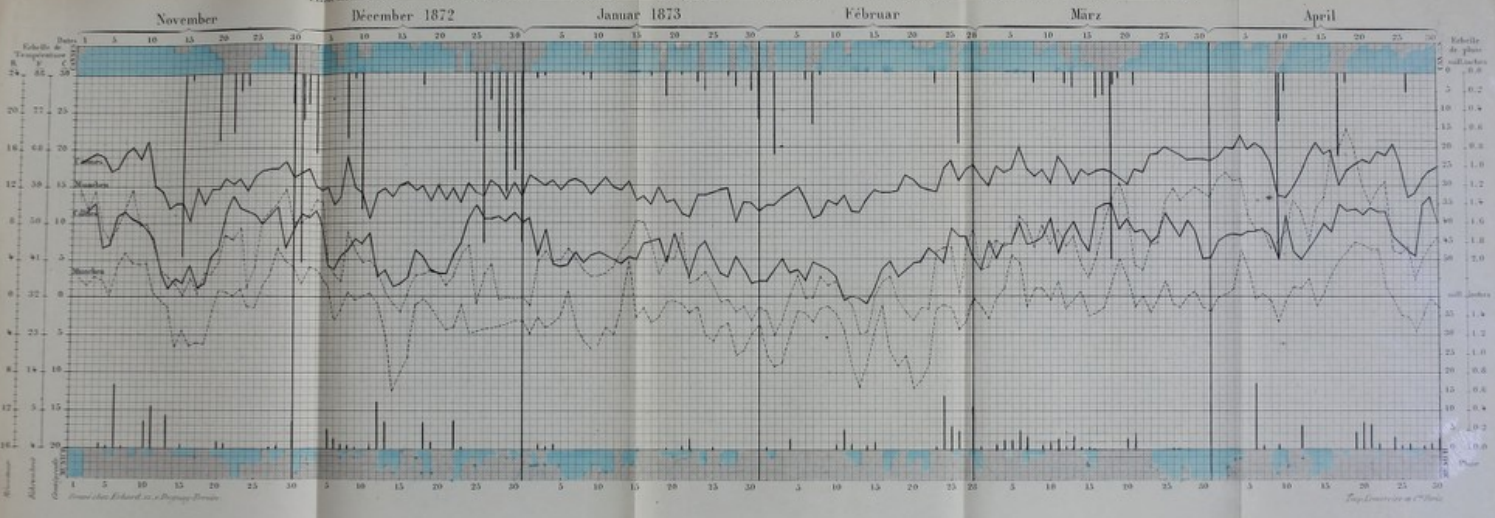


TABLE 6 — TEMPERATUR MINIMA UND MAXIMA — ZUSTAND DES HIMMELS — REGEN *Meteorologische Beobachtungen* MÜNCHEN (K. Sternwarte) und CANNES (D<sup>r</sup> de Valenciennes) 1872-73.  
 TEMPERATURE — ÉTAT DU CIEL — PLUIE MÜNICH CANNES TEMPERATURE — STATE OF THE SKY — RAIN











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