



Memories, Writings
and Botanical Notes
of
Sabine Johanne Marie Hannemann Helms
1866–1929

Based on her life at Childers, Queensland, 1895–1912
and travels in NSW in 1921



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Editor's Notes

Sabine Johanne Marie Hannemann was born in Middelfart, Denmark on June 19, 1866. She was a school teacher and a student of botany. In January, 1891 she married Rudolph Helms and they immediately traveled to Australia, at first living in Sydney where two of their three children (Andreas and Agnes) were born. In 1895 Rudolph was appointed first manager of the Childers Sugar Mill near the Queensland town of Childers where their third child, (William) was born.

In addition to parenting and leading an active social life, Sabine used her knowledge of botany to explore the vegetation of the Childers district. Rudolph ensured that a small area of virgin scrub near their home in Childers was left as a botanical reserve for her to study. She drew and made water-colour paintings of specimens of the flora, and she identified two new species that bear her name: *Grevillea Helmsiae* (Queensland Agricultural Journal Vol. IV Part 3, 1899) and *Geijera Helmsiae* (Queensland Flora Part 1, page 6, 1899).



In 1912, following Rudolph's retirement, he and Sabine returned to live in Copenhagen where Sabine became a well-known member of the Botanical Society. She gave lectures on sugar cane and its cultivation and published several articles on living conditions in Australia. Sabine had established a herbarium collection consisting of 1,600 plant species and 4,000 specimens from the Childers District and from as far north as Cairns, the latter gathered when Sabine and Rudolph made a visit to Australia in 1921-22. This collection was given to the Botanisk Museum in Copenhagen to create interest in the Australian flora among Danish botanists. Sabine was regarded as one of the most celebrated contributors to the Museum. Her book of drawings and paintings of plants from the vicinity of Childers was presented to the library of the Sydney Botanical Gardens in 1922 through the then curator, Professor J.H. Maiden. The book depicted about 90 species, showing flowering branches of natural size with details of flowers, fruits and seeds and accompanying notes. Sabine died in Denmark in 1929.

In 2000 the Isis Shire, Queensland, set aside a small, 3-ha remnant of Isis Scrub, near Childers, and named it "The Helms Scrub" in recognition of Sabine's pioneering work in Queensland botany. In 2013 the Bundaberg Regional Council established a website for the Helms Scrub that can be found at:

<http://bundaberg.qld.gov.au/environment/natural-resources/natural-reas/helms-scrub>

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SELECTED BOTANICAL NOTES OF SABINE HELMS

Relating to the presentation of a Book of Drawings of Queensland Plants to the
Sydney Botanical Gardens, with introductory remarks, added by R. Helms

Photos added were taken by John Helms

Note 1:

As to the reference in the Obituary of the beautiful album Mrs. Helms presented to the library at Sydney Botanical Garden, through the curator Professor Maiden, the following copies of correspondence are of interest. R.H.:

Botanic Gardens, Sydney

Memo from the Director (and Government Botanist)

30 March, 1922

Dear Mrs. Helms,

Since my return to Sydney I have studied the beautiful book of drawings of Queensland plants from the vicinity of Childers Mill and other places, that you have had the very great kindness, to present to this institution.

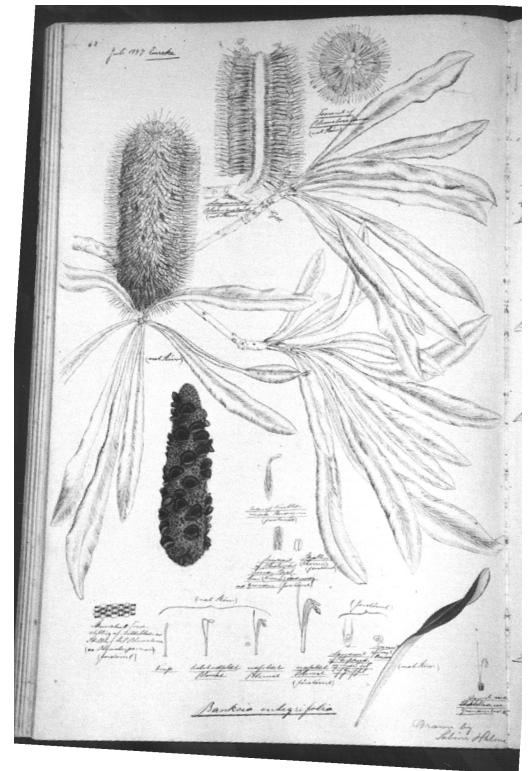
I am both delighted and filled with wonder in regard to the marvellous amount of labour, that you have put into these drawings, and the accuracy with which you have both executed the figures and described them.

The drawings will be a valuable work of reference to generations of students who visit this establishment, and in a month or two I intend to exhibit the book before the Royal Society of New South Wales, and to draw attention to its merits. The detailed catalogue that accompanies the work is very much appreciated.

Again assuring you of my gratitude for this wonderful work.

I remain

(signed) J.H. Maiden



A page from Sabine's book of drawings presented to the
Library of the Sydney Botanic Gardens in 1922 -
Banksia integrifolia

Note 2:

After receipt of Professor Maiden's acceptance of the album, Mrs. Helms wrote as follows on the flyleaf of the book. R.H.:

Sydney

April 7, 1922

In thanking Professor Maiden, the Director of the Botanic Gardens, Sydney for the honour of placing this book in the library for the use of students, I hope my work may be of some little value in the study of Australian plants, and if this should be so, my wish, when entering upon this work, has been realized.

All drawings have been made from fresh material, collected as often as necessary, to ensure a true characteristic form, my aim being, all through, to draw the plants as true to nature as possible in fact, never to draw any single line without having first studied the live object, not considering the artistic point of view.

Being scattered work, it is not suitable for publication, but in time to come, these drawings may be of use when special studies are made, in which case I hope they may be included, whenever suitable, in any prospective publication.

(signed) Sabine Helms
of Copenhagen, Denmark

Note 3:

At a meeting in the Botanical Society, Copenhagen, Mrs. Helms said the following about this work. R.H.:

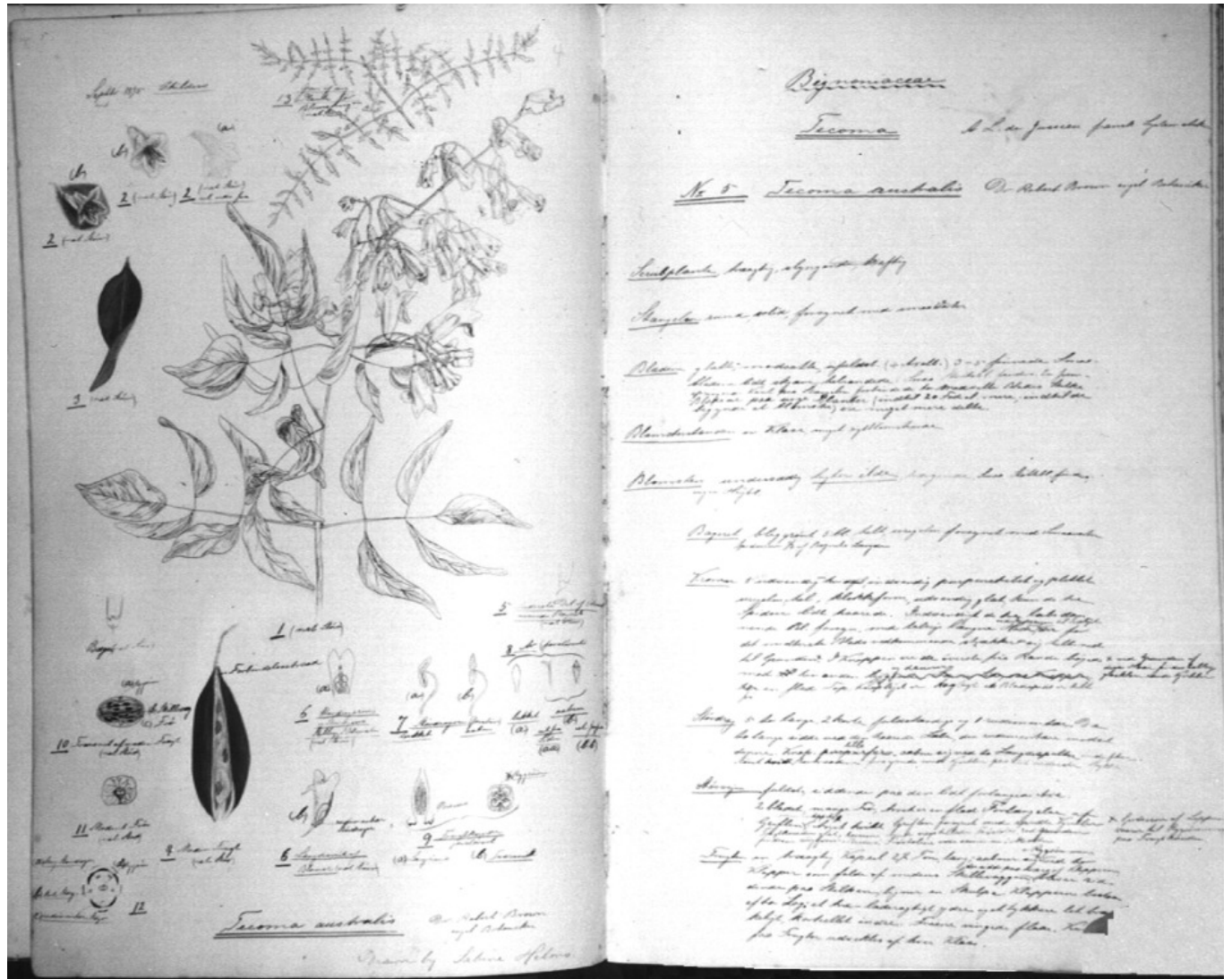
Several of those present have had occasion, to see my book with drawings of Queensland plants, executed in the nineties and beginning of this century; the book contains about 90 species, and depicts a flowering branch, natural size, details of the different parts of the flower and sections, most often enlarged, together with fruits and seeds, in other works I have endeavoured, to present each species as complete as possible.

Sufficient is painted with water-colours, to show the colour of leaves, flower and fruit.

A great deal of work has been put into this book, and all has been done very accurately after living material; I have never drawn a line, without having referred to nature.

The drawings embrace species of many different families and are therefore not suitable for publication as a whole, in the way, if the drawings had referred to one or two families.

Hitherto I was undecided what I should ultimately do with this work, but recently it became clear to me, that its proper place would be in Australia, and I presented it to the library, Botanical Gardens, Sydney.



A page from Sabine's book of drawings - *Tacoma australis*

Note 4:

After Mrs. Helms' return to Denmark from her trip to Australia 1921-1922, she gave a resumé of her journeys and experiences at a meeting of the Botanical Society, Copenhagen, at the conclusion of which she said. R.H.:

I will take this opportunity, to present my Australian herbarium to Botanisk Museum, consisting of 1600 species and about 4000 specimens. It has been a pleasure for me to collect the plants, and I hope the herbarium will serve, to create interest for the Australian flora, which in many directions is unique.

A great deal of work is done in the Australian States, but the field of operations is so huge, and I cannot help comparing the possibilities for botanists there and in Denmark. A young, able man anxious attaining the Degree of Dr., as a mark of his knowledge and ability, may have great difficulty in Denmark to find a suitable subject, while in Australia subjects in any desired directions are found with great ease.

My wish is therefore, that my collections may be made accessible as early as possible, and that they may help to instill interest amongst botanists, so they get inclined to take up the work, and give their contributions towards furthering the knowledge of the strange Australian flora, before civilisation spreads too much, and changes the original vegetation with cultivated plants.

There is room for all in such work, and it will always be a pleasure for me, to assist in any way.

Note 5:

At the same meeting Mrs. Helms mentioned the difficulties experienced in preserving the material collected, R.H.:

There are two ways to judge a herbarium: the one is the idealistic, that is getting the dried plants in form and colour to resemble the living ones, and that is of course the aim of the collector; the other standard for judging a herbarium is modified by considering the climatic difficulties encountered by the collector; also the chemical properties of the plants may be taken into account, as they often cause discolouration, turning the leaves brown or even black, and as far as my experience goes, flowers with crimson colour, lose this hue by drying, even if this is effected artificially by varying temperatures.

As regards the climates met with in Australia, they differ extremely; towards the North tropical, in the South it is temperate in high mountains even alpine, and inland continental; during the greater part of the year the air here is so

dry, that plants are perfectly dry within 2 or 3 days, when alternately pressing and spreading them.

Up North the moist air altogether prevents drying of plants, if means for artificial drying are not available, which is very rare.

Again and again papers are changed and plants spread, no matter what is done, the plants cannot become drier than the air, and by the great amount of handling, they are likely to lose their form and colour and get mouldy. Such were the conditions I experienced in Northern Queensland, and my diary tells, that the plants I collected at Belfield Station 31st May, and those I collected later, were not dried till 3rd of July, when I happened to visit friends, further South, who had a stove. All through this period I had to attend to the plants, and every night the floor of my bedroom was a carpet of plants.

My patience nearly came to an end, especially as I saw the plants deteriorate in spite of all my care, however I saved a good deal, though the plants in question did not reach the ideal before me, and those who have collected in moist tropical lands, will sympathize with me, and judge this part of my collection with leniency.

Note 6:

Of the many botanical notes left by Mrs. Helms, the following fragment only is copied; it describes the Vine Scrub (the Australian name for jungle) which especially had her interest. R.H:

The Vine Scrub in the tropical part of Australia is a rich a collection of vegetation found anywhere; further South it changes somewhat in character owing to climatic differences.

Seen from the outside it is a dense green wall, but on entering the darkness of the forest, there is not a green blade to be seen, except above, where the foliage is too dense for the sun's rays to penetrate. The trees are tall and slender, some with thick trunks, others thin, they are all without branches to a great height of the trunks; creepers in great numbers bind the trees together, and make the woods impenetrable; in the tropics, especially are fond species of *Calamus* (lawyer vine) which are never more than one inch thick, but wind several hundred feet between the trees, lengths of 500-600 ft have been measured, the stems and leaves are provided with hooks, fastening themselves to all they touch, these, with other creepers as thick as ropes and thin as string, twist out and in, forming nooses, knots and arches and binding the trees together to a compact mass of vegetation, which causes great difficulties when clearing the land.

The Vine Scrub, seen from the outside, is a mass of leaves of different shades; there are the dark green old leaves as a background for the younger light-green, the pink and red of the quite young shoots, the festooned creepers decorating the trees with their multi-coloured flowers. There are passion flowers, (*Passiflora australis*) with the light-blue-green leaves and white flowers covering the trees as a carpet, and *Passiflora aurantia* with pink flowers, which with age become red; then we see the Hoya with clusters of wax-like white flowers with a red centre, also lantana (originally introduced but spreading immensely) with rosette-formed flowers, white and pink. *Tecoma australis* which, in the flowering season, clothes its host completely with its large masses of yellowish-white, bell-formed blooms, while *Tecoma jasminoides*' large white and purple flowers are seen here and there. *Dioscorea transversa* (native yam) also hangs in the outskirts of the scrub and *Lygodium* (creeping maidenhair) must also be mentioned. Orchids, staghorns (*Platynerium grande*) and elkhorn (*P. alsicorne*) and birdsnest ferns (*Asplenium nidus*) decorate the trunks aloft. At some places the slender palms (*Archontophoenix*, *Cunninghamiana*, piccabben palm) jut up above the other trees, with their clusters of straw-coloured flowers hanging just below the lowest leaf, later in the year appear the red fruits the size of a pea.

The more thickset fanpalms (*Livistona australis*, cabbage palm) are also here in plenty; its popular name is derived through the quite young leaves in the middle of the foliage, which are edible, while excellent hats are made from the older leaves, and in moist places the bangalow palms (*Pychosperma elegans*) grow in profusion.

The presence of ferntrees gives the woods a special character, they are exceedingly graceful and pretty, especially when several stand together. In fact, no sylvan landscape can be more beautiful than a narrow, not too shady, valley with ferntrees through which a small creek winds. Vegetation completely hides the ground, the sun sends its rays through the tree tops, it is perfectly calm so the ferntrees have developed their long feathery leaves perfectly, while *Adiantum* ferns, also perfect in vigour and form, fringe the course of the stream. Such are the places to admire these charming plants, and such places are frequently met with. Some of the ferntrees have, more or less, considerable trunks while others spread their leaves close to the ground, these are finely divided, large, and of great beauty.

An *Araucaria* sometimes towers above all trees, its trunk densely clothed in creepers. The mighty *Ficus*, especially *Ficus Cunninghamii*, are spread through the scrub; this plant is interesting owing to its parasitic habits.

Other conspicuous trees that can be named are:

Erythrina vespertilio, corktree or batwing by reason of the shape of its leaves; it has large clusters of red flowers.

Sterculia acerifolia, called flametree, has masses of red flowers, appearing like a shining red splash in the dark forest.

Sterculia quadrifida is a fine leafy tree, all leaves dropping off at one time. It has large crimson, dehiscent fruits that have the form and size of a pear, and edible seeds tasting like fresh walnuts.

Baloghia lucida is also a fine-looking tree, but of a different character, the leaves being stiff and leathery. Cutting into the trunk causes a blood-red juice to exude.

Laportea, needle tree, also belongs to the scrub vegetation. They are up to 80 feet high. The leaves have scattered hairs which, when touched, cause great pains.

Xanthoxylum brachyacanthum has a peculiar trunk; the young branches are provided with bark-thorns, developing when they get older, at their bases smaller or larger knots, and the whole trunk is full of these; the timber is very pretty, called satinwood.

Pittosporum, several species are found; they are rather pretty and often planted in gardens.

Croton insularis is met with frequently, in a distance it can always be recognized by the brick-coloured, old leaves the whole year being interspersed with the green ones.

Vitis acuminata, on the contrary, loses its leaves at one time.

Brassaia actinophylla is a tree 20-30 feet high with a much furcated trunk. At the top of the branches the large, pretty, fingered leaves gather. Above these shoot 4 - 12 long flower stems carrying clusters of small, red flowers, very rich in honey and therefore much frequented by birds and insects. The tree is called umbrella tree.

Musa Banksii, *M. Hillii*, *M. Fitzalanii*, are found in small clearings or wherever the light permits; with their fine, large leaves they are rather decorative.

A peculiarity of the Australian woods is their richness in species; on half an acre I counted 60 different species of trees after the creepers had been cut down.



FROM JUNGLE* TO INDUSTRY
The Development of a Sugar District in Queensland, Australia
[* In Australia called "scrub"]

Translated from
Geographical Times (Geografisk Tidsskrift), Copenhagen
April, 1918

by
Sabine Helms

When, beginning of last century, European colonists commenced finding their way to Australia, only very little was known of this continent, and in their endeavours for permanent settlement, they had to feel their way. Nature gave nothing voluntarily, no plants yielding substantial nourishment; birds and fishes there were and marsupials, and though the aboriginals, in stone age stage, had been able, to sustain life with this fauna and flora, Europeans were forced to provide otherwise, in case colonization should be possible and endure.

The immigrants were puzzled by conditions in the strange land, they saw mighty trees grow in very poor soil, apparently quite unfit for cultivation of food-plants, the climate was peculiar, the seasons opposite to those in Europe, the rainfall was uncertain, and hot, scorching winds came from the North. The question was how best to fight nature, how to force it to yield; very often the way selected was wrong and after the disappointment, nature was, till a new attack succeeded better, left at rest.

To give a coherent account of the reclamation of a continent, from its virgin state to a mother's dignity and responsibilities, is beyond me, however, it fell to my lot, watching the development of a small district in Queensland, the Isis. When I settled there, the district was untouched by man, when I left it, 17 years later, the only remains of the virgin forest, was a small plot near my garden preserved as a curiosity, and kept with veneration, while the population had increased from 95 to 4000.

This district lies on the 5th degree of southern latitude, about 12 miles from the sea, as the crow flies, at an elevation of a couple of hundred feet; it may be an oasis come into existence by volcanic action, lava and volcanic mud having covered the land, which at the same period or earlier has been elevated from the sea, the sand mixed with shells indicating this. The lava formed a compact area round the crater, spread from there in all directions, and covering an area 14 by 12 square miles; in the centre of the district is yet found a depression without

outlet, which may be the position of the crater. By disintegration the mud and lava became in time the fertile chocolate coloured soil, and here grew up dense jungle, while *Eucalyptus* and *Acacia* covered the surrounding sandy and stony land.

Such areas of volcanic, red or chocolate coloured soil, yet interspersed with boulders of lava, are found at several places on the east coast of the continent, between the 18th and 26th degree of latitude; they lie as small islands, like a fat piece of Fyen dumped on the west coast of Jutland; north of the 18th degree their character changes and become mighty areas.

It was fine timber here and there in the jungle, which first drew the attention to the Isis, especially the big straight trunks of *Araucaria*, but when these were felled and transported to distant sawmills, quietness reigned again in the jungle (here called scrub), and the only trace of the industry, was the tracks left by the heavily loaded timber-wagons.

In those days land was purchased or rented from the State for pastoral purposes, and as the dense jungle, with its naked ground was unsuitable for cattle and sheep, it was considered valueless and scorned. However, beginning of the eighties, some of the timber-getters, now out of work, settled here; they got the land for a nominal price, cleared some of the jungle, built huts and tried to cultivate maize; the crop was abundant, but transport to a distant market, and handicapped by no proper roads, swallowed the profits; they were all poor, and lived very primitively.

When circumstances, at about the same time, forced the Danish agriculturists to a drastic change of their industry, from corn and export of live cattle to manufacture of butter and bacon, the Government gave them valuable help, but such providence was at that time not at the service for Australian farmers, they had to help themselves, and as maize was not a success, they experimented with the cultivation of sugar cane, and apparently the cane grew very well indeed.

However, to cultivate cane, without producing sugar will not do, so the greater part was left in the field to rot, or given to cattle.

At length a small branchline was constructed to the outskirts of the jungle, a small factory, to express the juice of the cane was erected, and the juice transported by rail, to a sugar refinery 50 miles away.

This was the beginning of the sugar industry in the Isis, but owing to the small capacity of the factory, only a small area could be put under cane, and the rest of the land remained unproductive till 1893.

In the *Eucalyptus* forest surrounding the jungle, the kangaroos and other marsupials fed, a curious emu stopped perhaps a moment, to run away in a hurry, in the treetops there was life and bustle of hosts of green parrots seeking

honey in the *Eucalyptus* flowers, their chattering is pleasant to the ear, it gives the impression of a steady conversation, and their intermittent sharp screeches do not sound disharmonious in the open air; morning and evening the laughing jackass fills the air with its peals of laughter; they eat young birds, snakes and lizards; with a snake in the beak, the bird flies to a branch aloft, knocks it hard against the branch and lets it drop to the ground; like a dart it follows picks the snake up again, repeating the process till the snake is killed.

These open *Eucalyptus* forests contrast strongly with the dense jungle (scrub); here creepers hang from branch to branch, forming at the outskirts a beautiful, dense, impenetrable carpet of leaves and flowers, but cutting through this, the interior of the jungle was dark; not a green leaf to be seen, except aloft where the foliage was too dense for the sun's rays to penetrate.

The ground was about naked, the trunks of the trees tall and slender, connected with each other by bare stems of creepers from the size of thick ropes to string, often provided with large sharp thorns; they form nooses, knots and arches binding the trees together to a compact mass of vegetation, penetrable only by cutting it down inch by inch.

While a rich bird life was noticeable in the outskirts of the jungle, for instance several kinds of multi-coloured pigeons, and the black and golden Regent, in the dark, moist jungle it was singularly quiet, and these areas have undoubtedly lain untouched till now; narrow tracks could be met with, either used by aboriginals or traces from the timbergetters work, and though the attack had not commenced in earnest, the axe lay at the root of the tree.

The reason why this fertile district was yet practically unproductive was simply want of capital and initiative.

To commence an industry on a large scale in a new district, large capital and great experience are required, and then it was, that a large Sugar Company, 1893, commenced a rational utilization of the primeval land.

This Company was founded in 1854 by a Dane of Scotch descent, who emigrated to Australia at an early age. He was the chief for about fifty years, and by his energy and wise guidance the Company grew to the mighty undertaking it is yet, with refineries in four states, and New Zealand, besides a series of sugar factories and plantations in Australia and Fiji.

In Europe the idea is not yet eradicated, that life in the tropics is easy and extremely pleasant, and that an industry there, in the main is carried on by swinging a lash over dark backs, while the Europeans in glaring white dress, imbibe strong drinks on a cool verandah. It has been so long ago, though never in Australia, but now-a-days a tropical industry, to be payable, must be carried on as intensively as at factories in Europe or America, otherwise it cannot compete in the world's markets; another factor, to combat indolence and luxurious living,

and introducing intensive work and modern technique is the small plantations and factories absorption by large companies.

Many hindrances can be overcome, and much can be done in a short space of time, when large capital and great experience are available, and such was the case, when the Isis district was made productive. Three parties should work in harmony: the State should construct a branch-line, to connect the district with the railways of the State, the number of farmers should be increased by subdividing the properties, too large for one man, after which contracts should be made between farmers and the Company for the sale and purchase of their crops, and finally it was the Company's duty to do the rest, to make sugar production possible.

The economy of the Australian sugar industry demands, that the cultivation of the cane is best left to comparatively small farmers, their agricultural land not to exceed, say 100 acres, while the factories should be large, only thus can cost of production be lowered and the smaller these are, the higher price will the farmers get for their crops.

The farmers were immigrants of old standing, to a great extent emigrated from Northern Europe; nearly all of them were without means to clear the land and plant the cane, so the first task of the Company was to lend them capital to start their farming, and control its application. In those days it was yet permitted, to introduce natives from the South Sea Islands to work in the fields; under control of the Government they were shipped from their islands and engaged for a period of three years; each farmer had a number these on his farm, which however did not relieve him and his family from toil, but to this they were used from the old country, but there was this difference, that their work in the new land would lead to property and a fair income, which would probably not have been the case if they had remained in the old land.

Now matters proceeded at a great pace, jungle was cut down and burned, cane planted and the Company was busy too. Surveyors and engineers commenced their activities; the situation for the factory was selected, and from this radiated a net of narrow-gauge railway lines for transporting the cane from fields to factory. Water was not available, so an artificial lake was formed, by damming a valley to collect rainwater; the large camp was by degrees replaced by buildings for labourers and officials, and when the machinery for the factory, locomotives and other material came to hand, all was ready for putting up, and about two years after the axe, which had rested at the root of the tree, had been put in motion, the first trainload of cane appeared in front of the factory, and the blast of "Childers Mill" steam whistle announced, the task was completed: a new piece of Queensland gained for industry and happy homes.

In suitable localities with fertile soil, and where the crops can be sold to a factory, good and large enough, to pay a just price for the cane, under such conditions is the cultivation rather simple and profitable, and the large capital the Company had laid out in building the factory, and establishing the industry, had within few years an astonishing effect; the district was not to be recognized, the jungle had disappeared, instead the green cane fields stretched over unknown elevated and depressed surfaces; fair roads had replaced the tracks, and numerous neat and comfortable houses were scattered in the district instead of the humble huts. The village Childers, formerly consisting of a public house, a smithy and a few cottages, had grown to a small township, and, believe me, the local authorities got busy to keep pace with developments, when the once miserable village became the centre for so much activity; yes, Childers experienced lively times when the factory, etc., was being built and the State at the same time constructed the railway line; land values rose enormously, and the influx of people was very great; in the period a couple of thousand men, employed or loafing, congregated in and about Childers, partly tramps from everywhere, the wages were high, and as hotels were built before banks, the township was frequently painted red; had it previously been quiet in the Isis, the times now were a bit hectic.

The duties of the farmers were to keep the factory supplied with raw material; they should plant, cultivate, harvest and load the cane on the Company's trucks. The area, extended gradually, amounted to 3,000 hectares, divided between 120 and 130 farmers, and the crop from the yearly cut are yielded an average of 10,000 to 12,000 tons of sugar. The season stretches over 5-6 months, and the factory and the whole district are in this period like a beehive on a sunny day, great activity everywhere. The farmers must harvest and load daily a certain quantity of cane, before the engine arrives to fetch the loaded trucks, and in the factory yard there is during the day a continual rattle and noise of the long trains of trucks, arriving loaded and being dispatched empty; at night the factory's yard must be full of cane, that the manufacture can continue the night through in the blaze of electric light, in and outside the factory.

Now as to all this activity, it must be remembered, that there is no other industry in the Isis, in other words the whole district is absolutely dependent on the harvest and the factory's work, still further it must be accentuated, that the industry here was so to say new, and that the farmers mainly had to gain experience in the cultivation, which augmented the Company's responsibility.

Such task was however nothing new for the Company, a staff of officials, trained differently, was sent to the Isis, and system was soon established, both as regards cultivation, harvesting and manufacture.

In short, this is description of how new country was gained for industry, and the same adventure is repeated wherever there is new land under the Union Jack, and such progress is due to individuals, not the official England.

It may be of interest, to state some few details concerning the cultivation, the workers, and the manufacture, even if I am not in position, to go into technical questions.

The cane vary in lengths, and can be 16 to 18 ft long; they look like bamboo, and like this the stem consists of joints, each provided with a sidebud; they are however not hollow, and the soft tissue inside the hard external surface, consists, between the vessels carrying water and nourishment to the plant, of cells containing sugar juice.

While new varieties are created by seeds at experimental gardens, the fields are planted with lengths of cane, about 10 inches long; they are laid in furrows, covered with soil, and in the course of some weeks, new plants shoot from the sidebuds of the pieces of cane; 15 to 18 months later the growth stops, and the canes are cut down, one by one, with a special knife; the green leafy top and other leaves attached are left on the ground, and the cane transported to the factory. The tops and leaves, exposed to the hot sun, are quite withered within a few days, and a fire is then generally put through the field. Some ploughing or other treatment between the stools is all what is required, to provide a new crop from them, and the process is often repeated 2 or 3 times, each time after a lapse of one year before replanting is necessary.

The treatment of the soil is in the main on same principles as everywhere else, and the farmer will also here generally harvest as he sows, and this counts from the moment he selects his land; results depend upon intelligence and industry.

The farmers engaged in the sugar industry, have of course their special worries, and amongst them can be named insect pests, which are always likely to appear, whenever one kind of plant is exclusively cultivated extensively for a long period of years. There was a moth, laying her eggs on the leaves, from where the tiny larvae bore their way into the stem, to grow big and fat, living and boring in the juicy tissue, and there was a kind of cockchafer, the larvae eating the roots of the cane stools and destroying large areas. However the most striking I have seen, in this direction, was a plague of grasshoppers, since when I am not skeptical as to the description in the Bible about the plague in Egypt. The greater part of Queensland was subjected to a protracted drought; this caused the grasshoppers from the mighty plains inland, to emigrate in an easterly direction where they at last were lucky to strike such succulent and wholesome plant as young sugar cane, a better diet than the dry, coarse, grass.

As said, they flew east, laid their eggs and the young brood, at this stage only able to move creeping, or in short hops, went on crawling in the right direction, and when they got wings, they got close to the promised land, and finally they reached the green sugar fields in the Isis; one day the rumour spread over the district of their arrival, and the community stood aghast; the creeping myriads made it appear, as if the very surface of the ground was moving, nothing could stop the army's progress; all green vegetation melted away, people stood absolutely powerless, the more destroyed by all sorts of means, the more numerous the pest seemed. At last deep ditches were dug, across the direction of the myriad's route, molasses, tar, etc., were poured into the ditches, well covering the bottom, and down into these millions after millions disappeared; later the hoppers got wings, and to get into such swarms was like being in a snowstorm, with the air filled with big snowflakes. But then nature brought forth the balance, and just as sudden the plague had appeared, as quickly it vanished; the grasshoppers were succeeded by a plague of mice, they devoured the eggs of their predecessors and then disappeared, but what became of them is not known.

In Denmark the prayer is for more sun, in a very great part of Australia it is for more rain they ask for, and a drought invariably follows some years with normal rainfall, and such periods of drought may sometimes extend a couple of years.

Only those who have lived through such a period can fully understand the longing for rain; day after day, for months, the heaven is scanned, the deep, blue vault, without a single cloud, with its dazzling sun, mercilessly radiating his burning rays. It gets more and more close, and smoke from forest fires casts a veil over the landscape; then clouds commence to gather, and for some hours they may hang dark and threatening above us, all watch eagerly, expecting an immediate downpour, to quench the thirsting land, but no, the clouds spread and the everlasting sun shines again; the same may happen day after day, week after week, it is as if it cannot rain, and this feature is characteristic for these periodical droughts.

At last it comes to a climax; lightning follows lightning, the electric discharges flash continuously over a pitch-dark sky, and the thunder peals alarmingly; the air is heavy and it is terribly close and dead calm, not a sound is heard between the detonations, nature holds its breath in expectation of what will happen; windows and doors are shut and locked in spite of the stifling heat; we now know it is not deception; then a distant roar is heard and suddenly the trees bend for the mighty whirlwind, which is the forerunner for the storm; a branch or tree is heard crashing to the ground, leaves and dust whirl sky-high, it gets pitch-dark and then the rain pours down with great force, in the course of a quarter of an hour of so the surface is like a lake. Then nature recovers and breaths again

calmly, while men feel an immense relief physically as well as in mind, and as sugarcane has the power to quickly recover after such visitation, the district soon looks prosperous again, only some withered trees and bushes bearing evidence of the bad time suffered.

As mentioned it was natives from the South Sea islands who cleared the jungle, planted, weeded and harvested the cane till the law prohibited their employment, though they were very useful; however the white workers demanded, they should be deported, they would have all the fieldwork reserved for themselves, and so it came to pass. Since then, for 17 years, the fight between employers and employees has raged, and it has only been possible to meet their demands by fiscal measures; these demands however increase constantly, in fact the unrest seems to become chronic.

It is especially the harvesting of the crop which creates difficulties, and a satisfactory machine to cut the cane has not yet been invented; the cane must be cut by hand, one by one, with two blows by a heavy knife, the first near the root and then the top shall be cut off; reckoning 8,000 canes per acre, it means 16,000 heavy blows with the knife, mostly with bent back, after which bundles of cane shall be lifted and loaded on trucks, all in all a work demanding great physical exertion. The work is of course well paid, the men earning say £2-3 per day. These cutters are only employed during the harvest; they work on contract, and come from all corners of Australia, returning to their homes at end of season.

When not going into the details, the manufacture of sugar seems simple; instead of extracting the sugar by diffusion, as is used in beet factories, the juice is squeezed out of the cane, by crushing it repeatedly between steel rollers; when the juice is extracted, lime is added, by boiling it is cleared, then filtered or cleaned otherwise, and the clear juice is then evaporated in a vacuum, till the sugar is crystallized; at this stage the sugar is a sort of porridge-like mass, consisting of sugar crystals and molasses, and the latter is separated, by passing the mass through centrifugals, while the raw sugar, now dry, is bagged and sent to the refinery.

By poor manufacture is mainly understood, that too little juice has been extracted, or too much fuel has been used for the evaporation, and great ingenuity and attention are spent on the improvement of the crushing of the cane and the reduction of fuel. Year by year the manufacture improves, but this means again, that a sugar factory is in constant development; every year old machines are thrown out, to install better ones, etc., in the human endeavours, to reach that perfection which is never attained; however the manufacture does improve. Such advances only became possible by a rational control from when the cane is planted till the sugar leaves the factory; especially trained officials guide the farmers cultivation, regulate the harvest and the transport of the cane; chemists

determine the sugar contents of the cane, of which the price depends, and the quantity of sugar which ought to be produced; the difference between the quantity of sugar in the cane introduced and the final output, has been lost during manufacture, and the task is now, to ascertain the losses during the various stages of the process, first then can the losses be reduced and improvements made possible.

The heating value of the fuel and the firing under the boilers are also controlled, and the chemist must as well look after experimental gardens, where manuring trials are carried on, and new varieties of cane tested.

Then there is a staff of engineers, to supervise and work the rather complicated machinery, different tradesmen, as such factories far from large towns, must be able to make all kinds of repairs, to keep the factory running.

Finally there are large kitchens, dining halls and barracks for the men, as generally from 150 to 200 get board and lodgings.

Well, now-a-days we are far from those times, for instance in the West Indies and elsewhere, when sugar was produced by a white man with a whip watching a crowd of niggers, and afterwards drinking rum on a cool verandah.

The production of sugar in Australia is a great national asset; it has made it possible, to populate some little part of the coastal lands in the tropics, and by this established some sort of right, to shut the doors for coloured races. It is also of great importance, that Australia produces the sugar it consumes, but owing to the exceedingly high wages in fields and factories paid to white labourers, a prohibitive duty has been levied on sugar introduced from abroad, and in consequence sugar is expensive in Australia.

The effects of the world war can be traced in all directions, and laws which generally caused many years' fight, are now made effective by a stroke of the pen, and by such sudden law has the Australian sugar industry been nationalized. This wide-reaching change was effected, to avoid speculation in sugar, and also for being spared for serious labour troubles, which were at the time considered inexpedient. The Federal Government now buys the whole production of raw sugar for a price determined by that body, dividing the money between the workers, in fields and factories, the farmers and the owners of the factories; the government has furthermore arranged with the refineries, that they shall refine the raw sugar for a certain amount, and sell the sugar to the public at a certain price. The world war has thus in this case brought the Australian sugar industry under the yoke of State-Socialism.



SOCIAL CONDITIONS IN AUSTRALIA

Translated from
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by
Sabine Helms

Australia is a continent not impressed by coloured races. Of the say, 150,000 aboriginals left, none are seen in the settled districts; the greater part is found in the North and Northwest, where only few Europeans are living, and some of the States have reserved areas for them, to live as far as possible their own life unfettered; however the race is dwindling, and may soon be extinct. Some Chinese, Japanese and Hindus are still here, but they are few and of no concern, and as the law of the country prohibits immigration of coloured races, they will yearly be less in numbers.

Australia is proud of being a "white" Australia, and only time will tell, if this policy can be carried through, and if Europeans through several generations can live and thrive in the tropical part of the land; as it is, Australia is "white", and in this direction she is the only continent similar to Europe.

However social conditions in Australia are somewhat different to Europe, the principal reason being the isolated position, and secondly the comparatively small population, mainly occupied by producing raw materials from the country's rich resources.

As time goes this will greatly change with an increased density of population; industries will grow up, communication with the rest of the world will be improved, and it is possible, that social conditions in Australia may alter, that these and experiments in this direction, not attempted elsewhere, may prove untenable, and Australia be forced, to keep pace with Europe and America.

For the present Australia lives her own life, tries through social laws, to provide the best essential conditions for life for the greatest number of the community, and it may well be said, that life in Australia is happier, generally, than in Europe.

Another question is, if the people will be elevated morally and augment their power of resistance by so much material prosperity, time only can disclose this.

The Commonwealth of Australia embraces the States of New South Wales, Victoria, Queensland, South Australia, Western Australia and Tasmania, also

Northern Territory and the English part of New Guinea, the two latter solely under the control of the Federal Government.

Its area is about three-fourths of Europe, 184 times that of Denmark, and the population 5 millions, not including the aboriginals.

Of these 5 millions, 78% are born in the country of European parents, chiefly from Great Britain and Ireland, 18% are immigrants from there, and 2% from other European countries, the rest are chiefly emigrated from Asia. Of Danes or of Danish extraction there are about 8,000.

It will thus be seen that this distinct continent is practically populated by a nation of European descent, and presents the only instance of a continent with only one language, and which with complete inner self-government only recognizes one supreme power, as a part of the British Empire. Consequently Australia is no longer "British Colonies", it is "the Commonwealth of Australia".

The democratic opinions secured all, men as women, who have completed 21 years of age, elective franchise to the Federal Parliament's two chambers, the House of Representatives and the Senate; the number of members of the first is based on the population in each State, while that of the Senate, as sort of Upper House, of equal number of members from each State, this to prevent a small State from playing a subordinate role in the Federation.

The rights secured by the Federal Parliament through the constitution, are all those concerning the Australian nation as a whole, such as defense, trade with foreign nations, shipping, immigration, foreign policy, customs, some of the taxes and dues, quarantine, lighthouses, etc., while the States keep their right to self-government as hitherto.

Although the Federal Constitution is based on the fact, that the States have entered into a Federation, not changed into a Union, it is already evident, that the Federal Parliament endeavours obtaining more and more power, and it is most probable, that this body will ultimately succeed, and the result will be a complete socialistic Government.

The constitution of a democratic community must to answer fully, be elastic enough, to keep pace with the cravings of the times, especially in a new country in rapid development, where conditions alter greatly within a short space of time, and amendments of the Federal Constitution can be made by referendum.

The liberal franchise has brought the Labour Party in power in both chambers, and as a result of this the Senate has become a reflection of the House of Representatives, instead of, as the intention was, that this chamber should be able to block ever-hasty legislation, so at present there is practically only one chamber.

This development has made it possible for the Labour Party, to accelerate the passage of social legislation in the direction it desires, and to an extent, seen from a European standpoint, may well be considered utopian.

Conflicts between employers and employees are subjected to the laws of the respective State, but should a dispute embrace an industry in more than one State, then the Federal Government steps in, and the quarrel comes before its judicial tribunal; as the employees generally prefer this judicial authority, it is easy for them, getting the quarrel extended to more than one State.

With the awards there is this drawback, that while the employer always can be found and punished in case he has not obeyed the judgment, the employees only take notice of it, in case all they ask for is conceded, otherwise the awards are ignored. If civil war or the stoppage of the wheels of all industries shall be avoided, what is to be done with thousands of men not respecting an award?

Any effective organization of employers, like in Denmark, is not known in Australia.

After this short resumé of how the social legislation has been made possible, the social conditions can be mentioned.

At the birth of a child, the mother gets a grant of £5, married as well as unmarried mothers, neither is regard taken to the position or means of the mother, as the Labour Party insisted, that all mothers should have the grant, to avoid this should be considered as alms. This money is paid to the mother personally, and cannot be deprived her in any way. Just after the law went into force, the better-situated did not claim the grant, but now all want it. This law cost the Government yearly £500,000.

The children have compulsory attendance in school, till the 14th-15th year; the instruction is gratis costing the State about £6 yearly for each child. The instruction is fully up to the European standard, and the States frequently send teachers to Europe and America, to watch new systems, etc.

Generally all parents avail themselves of these public schools, which give the children a good foundation for further education, and pedagogues with European experience have often declared the Australian children being especially clever, quick to learn and early to mature, probably due to food and climate.

However, in a country with a scattered and thin population, it is difficult reaching all, and the States endeavour in various ways, to employ travelling teachers in such districts, who go from house to house within a certain radius; in districts somewhat better populated provisional schools are established, a teacher instructing by turns in a couple of such. In New South Wales travelling schools have been tried; a vehicle built for this purpose being used, the teacher having two tents, one for himself the other as a schoolroom, together with books and

other requisites. He camps here and there, gathers the children together and after some time goes further, to return later. As soon as a district can muster a dozen or two children, a proper school is established.

At the age of 14 to 15 years a great number of children leave school, girls as well as boys, to commence practical work; those wishing further education must be taught in private schools, Grammar Schools; the establishment of Public Schools for higher education is at present under discussion, but it is easy for clever children, to obtain free education and finally access to universities; such stipends or bursaries are eagerly aspired to as well by rich as by poor; they are considered an honour for parents and child. In this way a child can get their whole education without cost to the parents, even the board.

Children leaving school at an early age, have opportunities to attend very fine technical schools, where teaching is laid so, that allows the youth attending his daily practical work.

The power of the Labour Party and its shortsightedness are however to blame for a great injustice to their own sons; it has demanded laws which unduly limit the number of apprentices which an employer is permitted engaging; as a consequence the sons of workmen do not learn anything properly, and too many become useless as tradesmen in factories, or they drift into blind alleys, or seek occupation somewhere in the great continent, where the industry is mainly production of raw materials, and where the technical skill required is minimal.

Another law decides, that the wages for "unskilled" labour shall be the same, irrespective of the age of the worker, so a youth of 19 gets the same pay as a married man of 40 years; the wages are of course regulated after what a married man, acquainted with the work can do, the youth is thus overpaid, arranges his life, habits and expenses after his high wage; later he cannot expect higher pay, and when he marries his budget goes to pieces.

Factories are subjected to the authorities supervision, and as a factory is defined as a place where two or more persons are employed by making or preparing articles for sale, nobody escapes; the male and female inspectors of factories have the right, at all times to ascertain, if the employees work under the proper conditions, if the fixed hours are kept, the wages correct, and the premises as the law demands. The workers are thus well safeguarded, and if he comes from another country, he clearly feels the advantage of working in Australia. The home is in order when he returns from work, the family is present and the meal ready; the employment of women and children is namely only permitted under so severe restrictions, that work by children is not known, while women generally only seek employment in factories till they get married, and as regards work in the homes for factories, then the control with this is very strict, as it is the employers' duty, to disclose where the articles are made and the payment given.

In this way sweating, miserable pay for work executed by women in their homes, is about unknown in Australia, and the wife has leisure, to devote herself to home duties, which she prides herself, to keep neatly and in good order; she and the children are clean and neatly dressed, all of which Australia is old-fashioned enough to appreciate.

The principle that an able and industrious man shall by his work be in position to support wife and children decently, can only create sympathy, and the whole community is prepared to admit, that if an industry cannot pay a "living" wage, the conditions must change, for instance by fiscal arrangements, and in case this is impossible, the industry better cease.

The amount of this "living" wage is by State and Federal judges, based on a family consisting of man, wife and three children, varied from time to time according to prices of food, clothes, rent, etc., the judges opinion being, that all workers shall receive a wage, sufficient to live a human life, marry, get children and support the family, as it behooves a member of a civilized community.

The workers are well placed, with their maximum 8 hours work and a minimum wage of £2-10sh to £4 weekly, or more according to training, the tendency is however, to reduce the working hours and increase the wages still more.

A fair comparison with conditions in Europe is difficult, in the first instance the climate is such, that the working hours ought to be less, then the level of the workers is much higher than in Europe, the demands of life greater, and it is these, more than what is actually wanted, to sustain life, which cause the necessity for much higher pay.

It seems however, that the work of able Australians in 8 hours equals what is done in Europe in 10; possibly his strength is greater, not only by the shorter hours, but also through better food and recreations, which his high wages permit.

As elsewhere, employer and employees have now mostly become Companies and members of Unions, and the personal relations between leaders and those who do the work are disappearing; another factor serving to loosen the old relations, is the workers self-esteem, which has risen together with their education and their position in the community. No servile servant class exists, and the whole community is all the better for this; mutual politeness, which does not necessarily lead to unseemly familiarity, is surely better than arrogant behaviour on the one side and feigned humility on the other.

The Australian worker, immaterial of his employment, considers himself, when work is finished, as good as his employer, and demands as a matter of course, when working the same politeness, as asked of him.

This self-esteem and independence we meet everywhere in Australia, especially when personal service or attendance are wanted, and may appear

somewhat offensive till one gets acclimatized, but is preferable to the importunities met with in public places in Europe; the law secures a liberal wage, while the employers in Europe force the public, to provide the wages; in this way the wage must be procured somehow, by humbleness or insolence, conditions unhealthy morally, for the receiver as well as for the giver. Certainly at certain places tips are given and expected, but the European system will never be introduced in Australia.

In case of injury during work, the worker gets of course compensation from the employer, if death results, heavy damages are due.

Old age pensions are given, to a man when 65, to a woman at 60, without any contributions from them; the amount is £26 yearly, in case the pension plus other income do not exceed £52 (life insurance excluded), and pension is also given in case the worker is unfit at 60 years of age; to obtain pension the birthplace shall be Australia or residence there 20 years.

The law was passed by parliament unanimously.

Invalids receive support from the State after their 16th year.

The influence of heredity on succeeding generations is great, but environment and manner of living operate too, and it is probable, that in course of time a new type of Caucasian race may appear in Australia; the emigrants left a cold, bleak and sleety climate, where work was hard and food often scarce, and came to a continent with the sun shining from a blue sky, say, 300 days of the year, and warm enough to feel more comfortable outside than inside, at the same time life's material wants were more easily obtained by all, but how a new type will be, can as yet only be guessed at.

The greater part of Australia has no real cold winter, and life can be enjoyed the year round in the open, the small children romp outside from early morning to bedtime, and those attending schools meet at the playgrounds afterwards. The children are thus not subjected the discipline in the homes, which is so necessary where the family gather together at evenings in heated rooms, each occupied with some kind of work. The great freedom may have its reverses, but it develops the children physically, also influences their character and creates self-reliance early. Young men and women are not afraid trying performing a task given them, and approach it with good heart, and sometimes they succeed amazingly well. This feature is very characteristic for Australian youths, they do not say like often in Denmark, I cannot do it, have never learnt it; such self-reliance added to practical sense helps the Australians over many difficulties.

The children are also favourably influenced by each family having their own little house; huge apartment houses surrounding a small yard filled with children who have no room to play, are unknown here; there is yet plenty of space in Australia, and people do not live in the large towns themselves, but in

suburbs in smaller or larger houses all surrounded by a garden, even if such may be very small. Better situated people have beautiful residences and magnificent gardens, and congregate especially at the bays and arms of the harbour (Sydney).

This out-door life carries of course with it a great deal of sport, and in these suburbs are found very fine sports grounds for cricket, football, tennis, etc., and the climate allows, that such sports are carried on on well-kept lawns. These grounds are especially crowded Saturdays, on that day the schools are closed the whole day, and business premises from noon.

The inclination to be in the open has naturally led to many holidays, equally enjoyed by young and old for excursions by land or water, and on such days the harbour in Sydney is filled with smart yachts of all sizes, while all means of communication are crowded, food is in the basket and everyone bound for a day's picnic, and the expensive and tiresome life in restaurants is only slightly availed of.

The young men love spending their holidays in camp, the tents being placed in some lonely spot, where they live as primitively as possible; they bring their guns and fishing tackle, prepare the ducks or fishes themselves and bake their own bread, dampers, in the hot ashes of the fire.

The older people spend their holidays in the mountains or watering places, and it is quite exceptional to see grand toilettes there, yet the people are generally much better off than those filling similar places in Europe. What the Australian families want at such times is opportunity for spending the day as they like, be free from noise at night, and for the rest same food as at home. Quite different when they go abroad and the trip is to Europe or some other continent, then they are out for an adventure, and want to try everything, and it is probable that people they meet, get the idea, that life in Australia must be very luxurious, which is not at the case.

The level is certainly higher than in Europe, the homes are good and well fitted out, and if that is the reason why life in restaurants is not general is hard to say, but fact it is, that the grown up members of the family hasten home after the day's work, and remain there during the evening, when they are not visiting a theater or concert hall; this is another characteristic feature.

Social life, as understood in Northern Europe with dinner parties, etc., is only known slightly; friends visit each other after dinner, and the ladies have their "at home" days, when visits are paid and received, and the social code about this matter is very strict; tea is served with home-made cakes, which art is highly developed.

There is this advantage with this social life, that where there is sympathy, it is possible for less well situated, to meet people better placed; their homes are larger and better, but money plays really no great role socially.

Australia is pronounced democratic, it has been so since the military regime ceased middle of last century, and the community has not missed the absence of rank and titles, inherited rights, etc., and all positions in the land to the very highest are equally obtainable for all; the question "who is his father" is never heard.

The possibilities for a fair competency and a happy life seem greater for most than elsewhere, it depends upon individual ability, ambition and the goal aimed at.

The ladies do not drink beer or spirits and seldom wine, but consume immense quantities of tea, and then, as said, they have the franchise; they did not demand this privilege, they scarcely asked for it, but the general opinion was, that such was only befitting and natural, and then they got the right to vote; this has not shown any special influence in politics, the ladies apparently voting like their husbands, neither have they shown any great inclination, to band together to further their special interests; their public activities remain as before, to help women and children who need their assistance. For the rest the Australian ladies do not differ much from those in Northern Europe; they may be more graceful owing to their sports training; they love as elsewhere pretty clothes, but in the streets no great differences are noticed, all are neat and look smart in white or light frocks; however in theaters, concerts and racecourses, there toilettes of note are seen, and fully described in the papers a day later; they are practical and able housekeepers, and the duties of mothers and daughters are only seldom limited to this, but call for much personal work, work which similarly situated women in Europe might not undertake with the same resignation and good humour; servants cost at least 3 times as much as in Europe and are besides difficult to get; they are however pretty smart at their work, but demand much time off.

When following the customs of the country, housekeeping is not dearer than in Europe, but what is more expensive is travelling, doctors, entertainments, beer and all kinds of spirits; luxuries are always expensive in a democratic community, and a family in Denmark, using say £750 yearly may, living in the same style here, easily use double this.

Besides the franchise, the ladies have another privilege, the right to bow first to the man she meets in the street and wishes to recognize, then he lifts his hat, and they are quite innocent of knowledge to the Danish etiquette, which demands the office boy to salute the bookkeeper, the bookkeeper to bare his head meeting the first man in the office, and finally the latter to salute the manager.

The workers dress much better than in Europe, and avoid showing any indication of their occupation, so bright buttons and braided caps are not favoured.

On the whole, the climate excepted, there is no great difference between life in a capital city here and in Northern Europe; at the one place the sun shines brightly on flowers and green parks the year round, at the other, sleet, low temperatures and bare trees 6-7 months a year. Means of communication are the same, the goods in the shops almost identical; here you can see the same films as in Europe and the plays in the theaters those which are played in London, often performed by the same actors, as these as well as famous musicians and singers generally include Australia in their travelling programme.

The Australian picture galleries do not come up to the standard of those in Europe, neither is there the same knowledge and taste of arts generally, but all this will come; till now Australia has been more engaged with the material sides of life, putting a large house in order.

Australia's large cities are few and all at the coast; it was from these the States grew and they have always played a big role; they receive all raw products, the riches of the land, and large mercantile houses there export the products; they are the buyers and sellers, while the producers are forgotten; neither do the men on the land care much for these big cities, and do not feel at home there, nevertheless they are the real Australians and their homes the real Australia, and this lies very far from the capitals; out there the man counts for more than his dress, and all spurious superiority is effectively scoffed at.

It is lonely out there, where the sheep and cattle roam, who provide the meat and wool, also there, mostly, where the wheat ripens; the life is rather primitive and the worth of men is judged differently from where the crowds move. Many localities are yet about as created, and so thinly populated, that the States have only been able to do very little, to ease the burdens, and Australia gives nothing without hard work; the forests must be cleared before corn can be sown, and sheep and cattle reared and tended before wool and meat can be produced. On the big plains inland, the isolation is severe, but cattle runs and sheep stations require enormous areas; conditions vary, the solitude can be more or less, the localities can be of older or newer date, but the people are largely the same, are they not pioneers themselves, their parents probably were and they have likely all as children or later, gone through the same purgatory, felt the same privations, experienced the same disappointments and hard work, and their common stamp and properties can be understood.

He, either by nature or necessity has become a practical man, who can turn his hands to anything; on him rests the responsibility to provide a shelter and food, while she must manage, under very primitive conditions, getting a home out of it, look after the children and home, and then have strength of mind not to be discouraged, and then hope for better times.

When a comfortable residence is noticed in old, cultivated localities, a small tumble-down hut often stands at the back of it, the walls are split trunks, the roof of bark, the floor stamped clay, this is the family's first home in the wilderness; it is left standing, it keeps so many memories.

All are dependent on each other in a large community, more or less; if the baker does not bring the bread or the butcher the meat, if water does not run out of the tap or gas or electric light fail, well, the housekeeping stops temporarily, but the settlers must themselves find a way out when something happens and of course they become men of many trades; neighbours may be far away, but should the need be, distances are not reckoned, help will come.

In the early days pioneering was often different from later; they were often young, educated men with considerable capital who took up large tracts of land; away they went with their herds and flocks, founded large stations, and though their life was more pleasant, than for the poor men who made their homes in a clearing in the forest, yet they too wanted a strong constitution, physical and psychical, to stand the strain and thrive in the loneliness. Yes, lonely it is on the large plains out west, where areas are so big, that neighbours in the usual sense are not known, and while the agriculturists in course of time may see a village or town grow up, life remains lonely on the big stations, though of late years the use of motor cars, covering large distances quickly, have been a wonderful boon.

Many of these large stations are now subdivided for agriculture, the large flocks have been driven further inland, others have become Companies, but some of the old sheep-kings remain, with areas as small kingdoms and some hundred thousand sheep; these men's ancestors started probably in a tent on the plains, to be succeeded by a house, which finally grew to a mansion with all comforts.

However, let conditions up country differ in circumstances and education; there is a greater feeling of equality than elsewhere, even in dress. Rich and poor, employer or employees, they are all Australians with national pride, self-esteem, ability, hospitality, humour and helpfulness; where they have done their work, and helped to make the place, that place is the best in Australia, and Australia is the best country in the world.

What they have succeeded doing in spite of difficulties and wants is not only proof of their personal worth, but of that of the whole nation.

The world war now raging, has already greatly influenced Australian conditions, not considering the thousands of young Australians who voluntarily have given their lives for the cause of the motherland, and it is probable, when the final settlement comes, that Australia may be forced, to stop her endeavours for social development in the directions I have indicated.



OBITUARY OF SABINE HELMS

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Translated by Rudolph Helms

Mrs. Sabine Helms died on July 25, 1929 after a few days illness resulting from blood poisoning and the Botanical Society lost in her one of its best-known and trusty members who, during later years, seldom missed meetings and excursions.

Mrs. Helms was born in Middelfart (Denmark) on June 18, 1866, daughter of civil engineer Daniel Hannemann. She went to N. Zahles school where she early showed special interest in natural sciences. Later, she was taught by Mr. Mortensen and when he moved from Copenhagen she continued her studies under Professors Warming and Lutken. Although she was not matriculated to the university they gave her permission to pass the examination "Botanicum" and afterwards attended Professor Warming's lectures, exercises, and excursions.

In January 1891 she married Mr. Rudolph Helms who was in the service of the Colonial Sugar Refining Co., Sydney, and went immediately afterwards with him to Australia.

While residing in Sydney she did not have much opportunity to continue her botanical studies but in 1895, as her husband was appointed manager of a new, large sugar mill at Childers, southern Queensland, the family moved there. Mrs. Helms had her home at Childers for 17 years.

At this period the land was still covered by virgin forest. Here she eagerly took up her botanical studies and a small area was, for this reason, left intact. In course of time her plans to study and describe the original vegetation ripened and with great ability and industry she described and painted over 50 species of plants. The ultimate result being a magnificent work admired by Australian botanists as well as by Professor Warming. In 1922 she, through Professor Maiden, presented this work to the Library of the Botanical Gardens, Sydney.

During these years she did not publish anything, but some new species she found were described by Professor Bailey, Brisbane, two of which were named after her.

The family returned to Copenhagen in 1912 and shortly afterwards Mrs. Helms became a well-known member of the Botanical Society. In 1916, she gave a lecture at the Society about sugarcane and its cultivation and during the next years she published several articles about Australia and conditions there.

Longing for more knowledge of Australia, Mrs. Helms made a trip to that continent during the years 1921-1922 during which she travelled extensively in New South Wales and Queensland right up to Cairns and Bellenden Ker where there is tropical vegetation. Though these wanderings often were exerting and difficult her botanical interest never slackened and by admirable energy she collected and preserved about 4,000 specimens, which were partly described by Professor Maiden and his assistant Mr. Cheel. Later she augmented her collections by visits to Melbourne, Adelaide, and southern Western Australia.

She presented her extremely valuable collections to the Botanical Museum, Copenhagen, and after her return she commenced the final descriptions. With rare energy she threw herself into this, by no means an easy task, and succeeded in finishing it a few years ago. These collections, with their numerous duplicates, have been of the greatest value and Mrs. Helms will always be recognized as one of the most celebrated collectors of the museum.

At three meetings of the Society, 1922-23 she submitted parts of her botanical results.

At the conclusion of this work Mrs. Helms was considering another trip to Australia where her children reside, but this plan was finally abandoned in 1929. However, her unwearied industry did not permit her to remain idle and during the summer of 1929 she was looking for some important task in connection with the Danish flora. Her sudden demise overthrew these plans and ended her exceedingly active life.

Powerful and energetic and with her great love of botany she succeeded in doing more than most professional botanists.

Her name will live long in the Botanical Society and permanently in the Botanical Museum where her Australian collections will, through the years, recall her indefatigable and unselfish work.

(signed)
Carl Christensen



Sabine Helms, 1923

