

THE RIJKSHERBARIUM, IN PAST AND PRESENT

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As is explained in other papers in this jubilee volume (v. Steenis - Kruseman, Smit) it was not on purpose, but by coincidence that the Rijksherbarium came to Leiden. However, Leiden will have been the obvious alternative after Brussels, for Fischer as well as for Von Siebold. There Reinwardt, founder of the Botanical Garden of Buitenzorg (now Bogor, Indonesia), was professor since 1821. There the State Museum of Natural History had been founded in 1820. There was also situated the old and famous Hortus Academicus with which also Von Siebold had his contacts while in Japan and which was the destination of a large shipment of live plants he had brought with him.

Actually, shipping the collections to Leiden meant the return to an earlier plan, discussed at the Ministry in 1827. Possibly at Reinwardt's suggestion the plan had been put forward to merge Blume's collection with those in the possession of Leiden University, then still called the Hogeschool (= High School). The main components of the University herbarium were the Reinwardt collection and the herbarium Van Royen, other important collections (De Vriese, Teysmann, Junghuhn, Splitgerber) only later coming into the possession of the university. Although the Rijksherbarium came to Leiden after all, the combination was not completed before the last year of Miquel's directorate (see the paper by Mrs. Van Steenis in this jubilee volume, p. 29).

The connection of the Rijksherbarium with Leiden university appeared not to be a very successful or peaceful one at first. Blume, the first director, was honoured with the personal title of professor but he had little or nothing to do with the university at Leiden and his relations with the professor of botany (which discipline at the time was not much more than systematics with large remnants of former medicinal botany) were not very friendly or fraternal. Much has been written about Blume's monopolistic vision of the status of the Rijksherbarium and about the resulting conflicts with the government and with colleagues. Although he formally lost the battle and had to acknowledge that his herbarium also had to serve the educational purpose of the university professor of botany, in reality the doors of the Rijksherbarium did not open till after his death.

Even then a formal connection with the university did not materialize. When appointed as Blume's successor, Miquel was professor at Utrecht and he did not want to come to the 'small, fever-ridden town of Leiden', as he put it in a letter to one of his many correspondents. So he remained at Utrecht and did not spend more than a small part of his time at the Rijksherbarium.

Suringar was the first director who at the same time was professor of botany at

Leiden university. The latter position he had filled since 1862 (as extra-ordinarius since 1857) and as such he also supervised the botanical garden. After Miquel's death he also became director of the Rijksherbarium (1871). Conflicts between the two officials could not exist any longer or if there were any, they were fought in one bosom (to borrow a metaphor from Lam in his farewell-speech). From that time the directors of the Rijksherbarium have always been professor or lecturer at the university. This has promoted the connection with this university, probably more than the formal move of 1876 when the Rijksherbarium was placed under the management of the Curators of the university.

In many countries the central (national) herbarium is connected with a large (national) botanical garden. This is not so with the Rijksherbarium which has no direct organizational connection with the Hortus Botanicus of the university and which does not have a garden of its own. Although in the past there have been ample opportunities for a change in this deviating situation, it has never been realized.

The most recent change in the way the Dutch universities are ruled under the University Reform Law (*Wet Universitaire Bestuurs hervorming*) has not made the situation any clearer. The position of the Rijksherbarium as a state institution is difficult to reconcile with the status of 'vakgroep', the lowermost unit in the democratically ruled university hierarchy. Moreover, the massification of the universities makes it more and more difficult for the governing bodies to acknowledge deviating functions like the management of a large collection as equivalent to education and research. The problem will be treated more extensively on p. 25.

Personal views on predecessors.

In this paragraph I will try to give my impressions of the several directors the institute has had, and of the rôles they have played in its development. Since during the greater part of its existence the staff was very small indeed, the personality and the views of the director were of paramount importance for the functioning, the status, and the achievements of the institute.

C. L. Blume was director from the foundation in 1829 to his death in 1862. He was a stubborn man, antagonistic, wanting to preserve his monopoly, suspicious, maybe not always quite honest. However, what the Rijksherbarium is now, a world centre for the systematic botany of the Asian tropics, can be traced back to Blume's activity and perseverance — not to speak of his abilities as a taxonomist. And so our judgment now may be softer than that of many of his contemporaries. At least mine is.

F. A. W. Miquel was director from 1862 tot 1871. I see his directorship as a kind of intermezzo. Its importance lies in the fact that prime minister Thorbecke probably would have resorted to drastic measures if Miquel, in whom he put great trust, had not consented to take the Rijksherbarium under his wing. Even now the personnel was reduced (see p. 18). Miquel opened the collection rooms, made material available to botanists all over the world and although he did not in the least identify himself with the Rijksherbarium like Blume did, but must have considered it as a rather inconveniently placed store-house for herbarium specimens, the institute profited from the radiation of Miquel's great fame and the admiration of his contemporaries. Miquel's view on the function of the Rijksherbarium is illustrated by his remark in an annual report that a botanical library in the Rijksherbarium was superfluous: 'only the books for daily use in the institute must be present, the remainder must be sought in the Library of the University'.

W. F. R. Suringar was nominated ordinary professor of botany succeeding W. H. de Vries who died in the same year 1862 as Blume. In 1871, after the death of Miquel, he was also appointed director of the Rijksherbarium and, as said above, he was the first to combine the three botanical tasks in the University: professorship, Rijksherbarium, Hortus Botanicus. To my mind he must be seen as the second builder. Suringar's view on the functioning of the institute was very balanced and he managed to build it along several ways during the quartercentury that he was in charge. He also occupied a central position in the, admittedly very small and usually rather provincial, botanical world of the Netherlands.

Suringar's period was a period of steadiness and gradual improvement but possibly he did not recognize the signs of imminent changes in botany which, at least in the later stages of his life, were visible. The attitude of the younger generation of Dutch botanists, many of them his pupils, seems to have been ambiguous: they held Suringar in large esteem and he must have been an amiable man indeed, on the other hand they thought him old-fashioned and hindering progress.

And so the first years of the 20th century, after Suringar's death in 1898, were marked by controversy regarding the Rijksherbarium's position and activities. J. M. Janse had become professor of botany in 1899 and at the same time director of the Rijksherbarium. He did not make a secret of it that he did not aspire at all to the latter position and after some years it was transferred to J. P. Lotsy, reader (called lector in Dutch universities) since 1904 and nominated director of the Rijksherbarium in 1906. Lotsy's time was a time of conflict, with two main elements. In the first place there was the controversy between Lotsy and Hugo de Vries at Amsterdam, a scientific controversy centering around the question of whether plant evolution is by hybridization (Lotsy) or by mutation (De Vries). De Vries was a very powerful man with great authority in and outside Holland, but he did not play a very nice rôle here. He succeeded in frustrating Lotsy's plans to give the taxonomy of the Rijksherbarium a more genetic, more experimental character, and only fear of competition can have been the reason for his actions. When the government refused to build a new herbarium with cultivation grounds, suitable for Lotsy's plans (although Parliament had supported them) Lotsy retired from his office as director of the Rijksherbarium (1909).

A second element in the conflict resulted from the introduction of another kind of botany, eager to replace the old taxonomic discipline. The experimental, physiological, and ecological branches of botany developed outside the Netherlands, especially in Germany (Sachs, Schwendener, Hofmeister, Nägeli, Strasburger, Drude) and they came rather belatedly to Holland. Janse was one of the exponents of the newer disciplines and that must certainly have contributed to his lack of enthusiasm for the directorship of the Rijksherbarium.

So on the one hand botanists in Holland, led by De Vries, did not approve of a Rijksherbarium where more modern, genetical and ecological trends in systematics could receive attention as Lotsy wanted it, on the other hand many botanists of the new-developing disciplines considered a Herbarium to be an old-fashioned hay-loft where innocent people could practise their hobby and where 'real' botanists could receive identifications if they wanted them. The latter attitude has lingered till far into this century and maybe some old-fashioned physiologists still adhere to these ideas.

With J. W. C. Goethart, director after Lotsy left, we enter a period of standstill, partly enforced by the environment, partly the result of Goethart's character. He

had been conservator since 1897, had been acting director twice, and in 1910 he was appointed as director. In the jubilee volume of 1931 he explains why, although he very much believed in Lotsy's approach of systematics, he was willing to stay on while Lotsy left. He was optimistic about the realization of new plans, albeit on a smaller scale than would be preferable, and he counted on the co-operative attitude of the Curators (Board of Governors) of the University and of the professors of botany in the Netherlands. In these expectations he was disappointed, the experimental work was largely frustrated and the external activities of the Rijksherbarium were restricted during his period. On the other hand he gave much thought and time to the perfection of the methods of storing, mounting, fumigating, etc. and this inheritance is still acknowledged in gratitude.

I must confess that Goethart's personality remains some of a mystery to me. According to testimonies of contemporaries and also according to many of his deeds he must have been a gentle person, helpful and kind, not easily to be angered. How the writing, after his retirement, of a sharp address to Parliament under the title 'The attack on our National Herbarium' (1932), fits into the picture, is not very obvious. Possibly he had experienced some conflicts (there are a few letters in the archives pointing in this direction) with the professor of botany (Janse till 1930, afterwards Baas Becking) which had made him afraid of a too heavy involvement of the director of the Rijksherbarium in the university. In 1932 it was already decided that Goethart's successor was to be an (extraordinary) professor, not a reader like Goethart had been. Anyhow, he considered the planned combination of chair of systematic botany and directorship of the Rijksherbarium to be the beginning of the institute's change (degradation, he would have said) into a teaching department and he thought that this would be more or less the end of the collection. Viewed from now, it was all a storm in a tea-cup, maybe it is also an example of someone who at the end of his career cannot adjust himself to necessary changes.

H. J. Lam brought the institute back to life. In 1932 Goethart had been pensioned, the conservator W. A. Goddijn being put in charge, and in 1933 Lam was appointed. He had to come from the Dutch East Indies, where he had been on the staff of the Herbarium Bogoriense since 1919. Lam was trained in the taxonomic school of A. A. Pulle, the well-known professor of systematic botany in Utrecht. In this period the taxonomic action was much more in Utrecht than in Leiden, Pulle being a much more gifted man than Goethart was. In the East Indies Lam had been engaged in the project 'Contributions à l'étude de la Flore des Indes néerlandaises', a series of papers containing revisions of large and small families and genera, designed to become a complete flora of the colony. In this series Lam had contributed the Boerlagellaceae, Burseraceae, Sapotaceae, and Sarcospermaceae and the work had shown him the scientific necessity of monographic systematic work on tropical families and the need for intensifying the floristic inventory of this rich country. Many-sided as he was, he also realized that a herbarium with large and valuable collections as Leiden at the time already possessed, should not restrict itself too much. Working from this vision he succeeded – and after World War II the circumstances were favourable indeed – in attracting a large staff, raising the scientific production, and enlarging the collections. Himself more of a contemplative mind and not at all experiment-loving, he did not bring in the experimental taxonomy (genecology), although in his time this 'new systematics' forcefully entered the scene. He may have had rational arguments for this too, e.g. the opinion that the institutes with the large herbarium collections must search for projects

which need these collections and which cannot easily be done in smaller places. It is certainly true that one does not need a large herbarium and a large library to perform good biosystematic (experimental and karyological) research in a species complex. A monograph of a tropical tree genus, however, can best be made in a well-equipped herbarium with types and other authentics, with a fair representation of material from the natural area of the group and with a good library containing also the old books.

By favour of a more intensive loansystem and by the explosive development of the microfiche this is less true now than it was in the thirties and forties, and then as well as now there are people who overcome all handicaps, but the general trend it was and partly still is. Experimental taxonomy has still hardly entered the Rijksherbarium's research programme, at least as far as Angiosperms are concerned. This discipline was delegated to the Laboratory for Experimental Taxonomy, which was founded when Lam retired in 1962. In a way the chair of systematic botany was divided then: Van Steenis succeeded Lam in the Herbarium, R. Hegnauer was appointed to the chair of Experimental Plant Taxonomy.

The Rijksherbarium owes very much to Lam who was almost thirty years in charge. His main achievement certainly is the increase in research output, collateral to the increase in scientific staff (see p. 18).

So we come to my predecessor, C. G. J. van Steenis, who managed to combine during ten years (1962–1972) the offices of chief-editor of *Flora Malesiana*, professor of botany, and director of the Rijksherbarium. Van Steenis came to Leiden in 1950 after having worked in the Bogor herbarium since 1928. About his life-work *Flora Malesiana* much has been written on various occasions; it may suffice here to remember that the staff of the Dutch-Indonesian Foundation, which was to make the *Flora*, was given hospitality in the Rijksherbarium and, when the political situation required it, was incorporated in the staff of the institute.

Especially during the directorship of Van Steenis the combination Rijksherbarium – *Flora Malesiana* became more and more fixed, also to outsiders. There is a slight danger in this, since people may forget that the activities of the Rijksherbarium staff are wider than *Flora Malesiana* only, on the other hand it is good for an institute to have a kind of seal, a trade mark by which it is known and renowned.

Fundamental changes in the institute's policy or activities were not made during Van Steenis' directorship. The gradual building of a many-sided scientific staff and the necessary technical and administrative personnel could be continued for some time and when I succeeded Van Steenis in 1972, I took over the responsibility for an institute with about 60 workers of which 25 were botanists. I also entered this job just after the new University Reform Law of 1970 had come into effect. Being a part of the university, the Rijksherbarium had to fall in with the rules set down in this Law. Internally this has worked out beautifully: without much trouble we have managed to find a way in which democratization, i.e. the establishment of a rather broad forum in which decisions are taken, is combined with efficiency which calls for delegation of power. We now have an Institute Council and a Staff Conference taking the important and basic decisions on budget, scientific programme and division of labour. The director's power is distinctly more limited than it was before, with all the pros and cons of course. Under the cons the increase of meetings, conferences, committees, formal and informal, ranks foremost. We try to keep it in hand, but democratic control is not possible without discussion, that means without

meetings. The pros are obvious: the staff is much more committed to its own communally taken decisions than it can be to decisions taken somewhere above. It does not necessarily mean that the decisions are better now than before, it does mean that one feels the decisions to be taken partly by oneself.

The scientific staff

As indicated in the above paragraph, a scientific staff started to play a more distinct rôle in Lam's time. Before that, the Rijksherbarium was more or less a one-man show and could to a large extent be identified with its director.

In the first period, Blume's time, the salary of a conservator had to be paid from the subsidy given by the national government for the running of the institute. As a consequence Blume could sometimes appoint such a man, but often the funds were insufficient. On that basis Fischer, Pierot, and Schultes worked for short periods at the Rijksherbarium and so did the 'assistant' Smeets. From the annual reports it is often not quite clear when personnel entered service, what their duties were and when they left. The only botanist staying for a longer period under Blume seems to have been H. van Hall, son of the professor of botany (and other disciplines, esp. 'rural economy') at Groningen, H. C. van Hall, who wrote a Dutch flora, the *Flora Belgii Septentrionalis* (1825–1841). H. van Hall was conservator from 1853 to 1862. He was dismissed when Miquel was appointed and during the ten years of the latter's directorate there was no conservator, the 'staff' consisting of the assistant Smeets only. Suringar apparently had to wait eight years before he got permission to appoint a conservator, viz. J. G. Boerlage, later succeeded by J. W. C. Goethart. Apart from some temporary appointments, possibly mainly with the argument of getting rid of backlogs, there was no other staff till in the period-Lotsy permission was given to appoint a second conservator. The first botanist to occupy the post was W. J. Jongmans, but he stayed only a few years. J. G. Hallier succeeded him as conservator in 1909 and stayed on till 1922. After Goethart had become director, W. A. Goddijn took his place as conservator, and Hallier was succeeded in 1922 by J. Th. Henrard. Miss C. Cool worked in the herbarium as assistant since 1921 and in honorary jobs before that.

So when Lam arrived in 1933, his staff consisted of Henrard and Goddijn, but the latter soon became professor of pharmacography and left the Rijksherbarium. Furthermore there were Miss J. Th. Koster and W. J. Lütjeharms who had succeeded Miss Cool after the latter had died in 1928, as assistant. Miss Koster was soon appointed in a more permanent position as successor of Goddijn, Lütjeharms went to South Africa in 1938 and was succeeded by S. J. van Ooststroom who had been assistant from 1934.

Till the War of 1940–1945 there was, consequently, a very limited staff consisting of one or two conservators and one to few assistants. During the war, however, and especially afterwards the staff enlarged considerably till in 1968 the present number of members (24) was reached.

This enlargement of the staff had several causes and several effects. In the first place the Dutch government recognized that scientific research as well as university training would need a large amount of money in order to make up for the arrears resulting from the pre-war economic crisis and from the war itself. Then the number of students increased in a most spectacular way.

For the Rijksherbarium it had the effect that not only a number of scientific collaborators were added to the staff with teaching as an explicit task next to

research, but also a fair number of scientific officers with as their tasks only research and curating. Round 1960 the Flora Malesiana staff, consisting of three scientific officers, one draughtswoman and one secretary, was also transferred to the Rijksherbarium.

The institute not only enlarged, it also changed its character. Slightly schematic, one might say that it changed from an institute where one keeps and names dried plants (where the plants are conserved by a conservator) to an institute where plant-systematic research is performed with the aid of dried plants and other means.

Keeping, naming, cataloguing the collection had been the ratio for the institute, notwithstanding the attempts made by Lotsy in the first place to put plant-systematic research in the front, research for which the plant collection of course is an indispensable tool.

This may seem a play with words only but I think it is in fact true that herbaria (and also museums of natural history, etc.) gradually have shifted their accents. Nowadays, if we talk about task and function of the Rijksherbarium, we mention the plant-systematic research first and recognize that we need to maintain and improve the collection for that purpose. In former times the collection was mentioned first, as clearly witnessed by Goethart's pamphlet referred to above (p. 16).

This change in attitude gradually started before the war with people like Pulle in Utrecht and Lam in Leiden, and it could become quite apparent also in the number of hours spent on research versus curating after the war when the staff increased.

The enlargement of the staff created the possibilities for more comprehensive research programmes than could be executed before. The first start of institutional research programmes is found in Lam's annual report over 1954/55, when for the first time he distinguishes 'divisions' within the institute. In earlier reports the activities of the individual staff-members were listed (in order of seniority!), now the staff was subdivided as follows:

1. Director (Lam)
2. Flora Neerlandica (Van Ooststroom, Reichgelt, 3 honorary collaborators)
3. Division of Tropical Phanerogams (Bakhuizen van den Brink, Van Royen, Kalkman, 1 honorary collaborator)
4. Division of Algology (Koster, Van den Hoek)
5. Division of Mycology (Maas Geesteranus, Bas, 1 honorary collaborator)
6. Division of Plant Sociology and Bryology (Barkman).

Collateral to this is mentioned the staff of 'Flora Malesiana' consisting of Van Steenis, Sleumer, Kern, Leenhouts, and Jacobs.

The grouping of staff in named divisions or departments is to my mind a kind of implicit research programme, in its rawest form and still with a large degree of freedom for the individual researchers.

This development has continued, the research programmes have become more and more important as a basis for decisions and choices, they have been explicitly put into words. Now we try to describe the projects, the research groups have their instructions and the whole lot is listed again and again by all sorts of organizations: the subfaculty, the faculty, the university, the 'Open Deliberations' on biological research as executed by the Royal Academy and the BION-Foundation, the working groups as established within BION, etc.

This is an inevitable consequence of the enlargement of the research input, and as most things on earth it has positive and negative aspects. Researchers will not as easily go adrift under the regime of a programme put in black and white, their

production will be watched, and there are regularly moments of evaluation where they can be called to order (or where they can call themselves to order, a procedure much to be preferred). On the other hand there are ample opportunities now for evasions in administrative embellishments and, worse still, for a situation in which creative researchers are restrained unnecessarily and are forced to do what they not really want to do and possibly do less well.

At present our staff is divided into four 'research groups', working on, respectively:

- tropical Phanerogams
- Cryptogams
- Dutch and European flora
- comparative morphology of Higher plants.

Each of these groups has a written assignment approved by the Subfaculty's Council. Research projects have to be compatible with this group assignment. Project descriptions are made in the group and are discussed (in outline and results) by the Staff Conference of the institute.

Projects number 18 at the moment, but this is not a fixed number. Projects can be terminated, changed, or started by decision of the Staff Conference. By far the largest project is Flora Malesiana in the group Tropical Phanerogams. In the Cryptogams group diversity is largest since this group embraces mycology, algology, bryology, and pteridology.

In a number of papers in this jubilee volume the present research in the several fields is placed in a historical perspective. Together these essays give a good picture of our activities in the past and in the present (and, consequently, also in the future).

The publications

Naturally, in the course of 150 years a large number of scientific, semi-scientific and popular publications have been written by staff-members and other persons connected with the institute. There is no point in giving a full bibliography, even if this were possible, but we must give some attention to the publications, the lasting monument of our activities. In this paragraph and in the appendices on p. 129 we will make a choice which, as with all choices, can be disputed.

For Blume there is not a complete bibliography. In Stafleu & Cowan, *Taxonomic Literature* 1, 1976, a list of ten books is given of which eight were published wholly or partly after the Rijksherbarium was founded. Indeed, Blume's most important contributions to the taxonomy and floristics of the Dutch East Indies were published during the time he was at Leiden: most of the 42 instalments of the *Flora Javae* (1828–1851, with J. B. Fischer who died in 1832, as co-author), the four volumes of *Rumphia* (1836–1849), and the two volumes of the *Museum botanicum Lugduno-Batavum* (1849–1857).

Miquel's scientific production has been fully listed and annotated in Stafleu's biography in *Wentia* 16, 1966. From his Rijksherbarium period two books must be noted. In the first place there are the very important *Annales Musei Botanici Lugduno-Batavi* (4 volumes, 1863–1870). Miquel himself wrote most of the contents but others contributed too. One is inclined to consider the *Annales* as the Rijksherbarium's first journal, but according to a note in Miquel's last annual report (dated three days before his death, when he was already a sick man) he himself considered the book as closed after the fourth and last volume. The second

book to be mentioned is the first part of the *Catalogus Musei Botanici Lugduno-Batavi*, dealing with the *Flora Japonica* (1870). This was finished shortly before Miquel's death and what was intended to be a complete catalogue of the collections, never became completed.

Suringar did not write very much and there is no printed bibliography. He wrote mainly on two subjects: algae and *Melocactus*. In the series he initiated in 1871, *Musée de Botanique*, he published papers on both subjects and, moreover, he also gave room to two papers by his pupil Melchior Treub, one on the root meristem of Monocotyledons and one on *Selaginella martensii*. After his death his son, J. Valckenier Suringar, edited two instalments on *Melocactus* (1903, 1905) and then the publication stopped after three volumes.

One of Goethart's merits certainly is the foundation of the first real Rijksherbarium journal, the '*Mededeelingen van 's Rijks Herbarium, Leiden*'. From 1910 till 1933 seventy numbers appeared, very diverse in size, each number containing a separate paper with its own pagination (except for the more extensive papers which had to be divided over more numbers of the *Mededeelingen*).

Soon after his arrival Lam replaced the *Mededeelingen* by the journal *Blumea*, in a smaller format and, as journals nowadays do, containing several papers in each instalment. The first instalment was published in August 1934 and the row in the bookcase now shows 24 complete volumes (the present issue being the first part of volume 25) and 6 supplements. The name of the journal remembers the founder of the institute and is in agreement with E. D. Merrill's then recent plea for 'One-name periodicals' (*Brittonia* 1, 1931, 1–5), warmly supported by Lam.

Persoonia started in December 1959. That the Rijksherbarium became the publisher of a mycological journal, is largely to the credit of Dr. M. A. Donk who after a career in the Dutch East Indies came to Leiden in 1956 where he succeeded, with Lam's wholehearted support, in establishing a mycological centre at the Rijksherbarium. In the mean time the 9th volume is completed and 1 supplement was published. Here too the name is in memory of a botanist whose name is connected with the institute, although he never worked there: C. H. Persoon.

All Rijksherbarium journals, even Miquel's *Annales* and Suringar's *Musée* to start with, and in their track the *Mededeelingen*, *Blumea* and *Persoonia*, have always had a mixed character in the sense that they have been founded as a medium for the publications both by staff and outsiders.

Of the 70 numbers of the *Mededeelingen* about 40% was written by authors from outside the Rijksherbarium, but it must be admitted that expressed in pages the percentage is undoubtedly much lower because of the very thick monographs by Henrard. In *Blumea* the outside contribution has remained rather evenly one third of the number of papers, in *Persoonia* the balance shifted in the course of eight volumes from about half to nearly seven tenths of the number of papers coming from outside.

Gorteria is the more sophisticated successor of a stencilled publication which went through 19 numbers under the name *Correspondentieblad ten dienste van de floristiek en het vegetatie-onderzoek van Nederland*. The first number of the *Correspondentieblad* appeared in December 1956, the last one which contains the index to the entire journal, in August 1961. This unofficial bulletin was intended to strengthen the communication between those who were interested in the Dutch flora and vegetation. The need for it reflects the revival in this field, the renewed interest in the autochthonous flora which became apparent after the war and which

involved amateurs as well as professionals. The *Correspondentieblad* was succeeded by a printed journal, of which the first instalment appeared in September 1961. The frequency is 6 numbers per year and in the mean time the 8th volume has been completed (2 years for 1 volume). The name of this journal commemorates David de Gorter (1717–1783), a Dutch botanist and the author of the first Dutch flora in which Linnaeus' binary nomenclature was followed (*Flora Belgica*, 1767). The journal is now published in collaboration with several other botanical institutes in the Netherlands, the editorial responsibility, however, remaining with the Rijksherbarium. Authors from outside the institute are in the majority.

In this paragraph also *Flora Malesiana* must be mentioned. As said earlier, in the minds of many botanists *Flora Malesiana* and Rijksherbarium are firmly linked, although a large number of collaborators from many countries are working on the flora and although formally it is a publication jointly sponsored by Lembaga Biologi Nasional (the National Biological Council) at Bogor, Indonesia, and the Rijksherbarium. In Van Steenis' essay in this jubilee volume more data are given about the progress of the flora.

In the wake of the flora itself some other serial publications arose, the *Flora Malesiana Bulletin* highly appreciated for the wealth of information it contains, the *Identification Lists* and the *Miscellaneous Records* of a more technical nature.

In list b of Appendix 2 (p. 133) the reader will find particulars on some serials with which the Rijksherbarium has or has had connection in some way or other.

Technical, administrative, and other personnel

Mr. J. J. Taffijn is the only lower-ranked member of the personnel about whom I can trace some data from the older times. He was 'bediende' (employee) according to Miquel's annual report over 1862 and he found his task in the more mechanical labour like sorting, mounting, opening packages, etc. He is a 'net werkmán' (a tidy labourer), says Miquel approvingly. In later times he also acted as 'custos' of the building and as chief of the non-scientific staff. Since he was pensioned in 1912 after 57 years of faithful service, he must have been appointed under Blume in 1855 and so he has worked under six directors, a record unbroken up till now.

The annual reports written by Blume and Miquel are for the rest quite silent about non-scientific personnel and it may be surmised that most of the time there was only one employee or maybe two.

Probably there was a slight increase under Suringar in the last quarter of the 19th century, but the first data I have been able to find are those of the year 1907/1908. Then there were, apart from Taffijn, three other employees: H. J. S. Nieuwenburg, P. Verstraeten, and H. Steenwijk.

With some fluctuations the non-scientific staff remains on this level till Lam starts re-building the institute. According to his report on September 1st, 1933, there are present: 1 amanuensis for the collections, viz. W. Wieringa who was appointed in 1928 (Amanuensis is in Holland often used for a laboratory attendant, sometimes the civil service rank was also employed for functions outside the laboratory), 1 amanuensis for administration and library (H. J. van der Hee, appointed in 1916), 1 employee as draughtsman and photographer (J. P. M. Biegelaar, appointed in 1921), and 1 employee for work in the collection (H. J. van der Reyden, appointed in 1920). A secretary was honorary at the time, as was rather customary at this time of un-employment, but next year she came in a paid position.

Writing this, I cannot refrain from thinking that I am getting older: I can remember three of these gentlemen from my earlier days in the Herbarium!

From then on, here as well as in the scientific staff, a steady increase in number can be established: eleven in 1947, twenty-three in 1956, thirty-five in 1968. The increase is present in all categories, in the collection managing staff as well as in secretarial and administrative functions, in the domestic department as well as in the studios or the laboratories.

The increase in collection managing staff became a necessity because of three factors: the growth of the collection (the average number of additions, as calculated over several decades, is 35.000 numbers per year), the increase in number of the scientific staff, collaborators and students which caused a multiplication of the internal use, and lastly the growth of the loan connections which enlarged the external use.

Also the library has grown in importance. It is probably the largest botanical library in the Netherlands now, specialized of course in the descriptive branches of systematics, morphology/anatomy, vegetation study, etc. A large number of foreign journals, many of them unique for the country, enhances the value and underlines the national position of the library in its field.

In the course of time there have been many changes and replacements of course and even if it were possible to recover a complete list of personnel from the archives, this would not be very useful. Rather I shall give an outline of the present organization, together with the number of personnel in each part of it.

Administration: 2, viz. the administrator and his assistant.

Management of collections: 11, viz. 1 chief, 3 collection managers each for a specified part of the collection, 3 employees in charge of inserting new and returned specimens, 2 employees for mounting, 1 administrative officer, 1 employee for general services. N.B. Most of the mounting is done by persons posted at the Rijksherbarium by the Municipality of Leiden under a Social Employment Scheme.

Library: 5, viz. the librarian, 2 assistants, 1 employee for general services, xerox, etc. one vacancy.

Secretaries: 5, of which 1 vacancy.

Draughtsmen and -women: 4.

Photographer: 1.

Domestic service, including maintenance of building and instruments: 6.

Scientific assistants: 4, viz. 2 analysts, 1 botanical assistant, and 1 administrative officer for documentation.

Under the prevailing rules for the Civil Service these people are almost all in permanent positions. That means that, unless the number of positions increases, changes in the organization can only be made when there is a vacancy in the right quarters. Lately we have also been confronted with restrictive measures and it is no longer certain that vacancies can be filled. This makes the organization less flexible than desirable and new tasks like e.g. electronic data processing in the herbarium, are difficult to realize when wanted.

Compared with other herbaria, we are certainly not badly off with our auxiliary staff. To a fairly large extent we can follow the axiom that a trained scientist must not spend much time doing jobs which a technician, a secretary or a photographer can do at least as well. To be really efficient in this respect, however, we would require another dozen positions. Cost-consciousness not being one of the prevailing

characteristics of governmental research institutes, the idea of adding this dozen does not appeal very much to the pertinent higher levels.

Teaching

At least since the times of Suringar teaching plant systematics and related subjects has been recognized as a task the Rijksherbarium should not evade. Formerly it was only in the person of the director (ordinary or extraordinary professor or reader) that the teaching was concentrated but, als already mentioned on p. 18, when a staff developed teaching jobs were also assigned to several of its members.

Up till 1933 we have hardly any data about the connection between students and the Rijksherbarium. From time to time a remark is made in a report about a student working in the herbarium and it may be assumed that at least under Suringar, Lotsy, and Goethart, this has occurred regularly although not very often.

In 1933 Lam came and made the annual reports more informative. From that time on we have more insight in the teaching task of the institute. Lam obviously regarded teaching as belonging to the institute's task and not only as the assignment of the professor. So in teaching as well as in other fields, 1933 marks a clear break in views and activities. From that year till in the sixties the pattern of the Rijksherbarium's participation in the university's teaching has remained virtually the same. There were lectures given to younger and older students by the professor and later also by lecturers of some rank or other. The following can be mentioned: J. Th. Henrard docent from 1940 to 1946, S. J. van Ooststroom lector from 1951 to 1953, J. J. Barkman docent from 1953 to 1973, H. C. D. de Wit lector from 1953 to 1959, M. A. Donk docent from 1956 to 1972, C. Kalkman docent from 1960 to 1972, C. G. G. J. van Steenis professor on a special chair founded by the University Fund Leiden from 1953 to 1962, Miss A. J. den Held docent from 1973 to 1975 (lector is more or less equivalent to the British reader, docent is a general term for a lecturing assignment given by the Minister of Education).

Next to the lectures there were practicals, courses of either a half day each week during the whole year, or fulltime during some 4 to 6 weeks. For the young student, in biology as well as in pharmacy, these practicals contained a survey of the Plant Kingdom, for older students more specialized subjects were taught.

Excursions of various kinds, in the Netherlands and other countries of Europe, were part of the programme and so were the 'kaswandelingen' (literally: walks in the greenhouse), where small groups of students went into the botanical garden and its greenhouses to learn about plants according to the whims of the weather and the tutor.

After the 'candidaats' examination (after some 4 years) Dutch biology students came into contact with the research in the different departments. According to their choice they studied subjects for periods from 6 to 12 months, also in the Rijksherbarium. The first subjects given by Lam consisted mostly of the identification of collections but gradually the subjects became more sophisticated and soon the students were doing real research (under guidance of course) in the fields of taxonomy, plant-geography, morphology or phylogeny. The numbers of candidates doing a subject in the Rijksherbarium did not become very high: in his first three years Lam mentions 3 to 5 students per year. After 1950 the number increased and 6 to 10 students entered each year.

In 1963 there was a change, connected with the foundation of the Laboratory for Experimental Taxonomy and the nomination of Professor Hegnauer (see p. 17). It was agreed that the teaching of the Rijksherbarium would be restricted to a four weeks' course in Angiosperm taxonomy for 3rd year's students, some excursions, lectures for older students and candidate's subjects. The other parts of the subfaculty's programme in plant systematics were allotted to the new laboratory.

Later still there have been all kinds of changes and adjustments. The division of labour with the Laboratory for Experimental Taxonomy has been adapted and the Rijksherbarium is now involved in all phases of the study in biology although certainly more heavily in the later and more specialized phases. The full programme now contains:

lectures in the propaedeutical phase;

practical courses of 3 or 5 weeks (full-time) in Angiosperm taxonomy, floristic plant-geography, algology, mycology, bryology, pteridology, palynology, not all of them given each year;

excursions, often in collaboration with the Laboratory for Experimental Taxonomy and/or with zoologists;

lectures and seminars with specialized topics, for advanced students;

research assignments (candidate's subjects), as far as possible fitting into the institute's research programme and coached by one of the staff-members.

In the older times the conflicting interests of 'Collection' and 'Teaching' have often been stressed in annual reports, letters, etc. The main difficulty seems to have been: is it admissible to give valuable herbarium material from the State's collections into the hands of students for the purpose of teaching? The changes in botany, the changes in teaching aims and methods, and possibly also the growth of the collection have made this no longer a pertinent question and the answer may be yes or no, depending on the purpose. Routine practicals will use specially collected or specially cultivated specimens, not the rare, valuable, unique herbarium specimens. The candidates, however, are involved in real research and they make use of the collections in the same way as the staff.

The conflicting interests go much deeper nowadays and they are related to the position of the Rijksherbarium in the university about which some remarks were made already on p. 14. Most people will agree that teaching, on advanced level at least, is an essential activity for a research institute. The reasons may be mixed, partly egocentric (one must take care that a younger generation can fall in when the older one retires), partly altruistic (interested students must get the opportunity to participate in this fascinating branch of research). That does not, however, necessarily mean that research institutes must be placed in universities and there are very many examples, also in the Netherlands, of research institutes which have agreements, written or not, with universities regarding the intake of students.

In recent years, under the influence of a tremendous increase in the number of students, the Dutch universities have been forced to admit that teaching is their first and major assignment. It is quite obsolete and untrue now to consider the university as a temple of science with research as its foremost task. Certainly, research must be done in order to keep the teaching on a scientific level, but the university of today is no longer the perfect place for research, it is just a place where research is (still) possible.

Because of this and of the consideration, that the care for collections is a rare and

alien function in universities, at least in Holland but probably in most other countries as well, doubts have been expressed in some quarters whether in the present circumstances the university is the most sensible place for the Rijksherbarium. However, after more than a century within the university, one does not change so easily.

The buildings

In Mrs. Van Steenis' essay in this jubilee volume we are told in which buildings the collections have been housed during the 150 years. The longest period has been spent in Rapenburg 33 and annexes. There we were located till the new building in Nonnensteeg 1, next to the Botanical Laboratory and the Hortus Botanicus was ready at the end of 1912. A 'temporary' annexe at the other side of the Hortus was opened in 1956, but the building remained too small and the move in 1964 to Schelpenkade 6 came as a relief, although the carpological collections and the material in spirit had to be put away in another place (they have only recently been moved to the Schelpenkade). The new building was not really new, it is an old textile factory renovated to suit the new purpose. Although at the time we fully realized that the security in the new building was a very weak point, especially because of fire hazards, we had to accept it since working in the Nonnensteeg had become impossible. And moreover: it was only a 'provisorium' they said, for some 7, 8 years, 10 at the most.

Recent history causes a less optimistic vision. In 1978 a plan for a new building, to be built immediately after the planned new Biological Laboratory, was rejected before it could come to full flower, and at the moment I am writing this paragraph there is no prospect at all for a new building in anything like the 'near' future. As far as we can see now, we will be in the factory for another twenty years.

Whether this is the right way to house one of the nation's valuable scientific collections....? In my opinion this is a rhetorical question and my conclusion can only be that the Rijksherbarium has become the victim of the postwar enlargement of the universities which made necessary the construction of many new buildings in order to keep pace with the vastly increasing number of students in most disciplines. In the race for priority on the building list an institute of our signature, with as main functions research (and not even vital for the national economy!) and collection management, can hardly be expected to be a winner.

I realize that this is a sombre note to end this story but it would be unrealistic not to mention the problems we are facing at the present time. In the light of the history they tend to lose some of their sharp edges too. The Rijksherbarium has had difficult times more often and has survived nevertheless. After a period of growth we have now entered less prosperous times and it is clear that not all our ideals will be fulfilled. However, the Rijksherbarium may be old, it is also very much alive and I am quite confident as to its future.



W. F. R. Suringar (1832–1898)
Director 1871–1898
Photo in archives Rijksherbarium



J. M. Janse (1860–1938)
Director 1899–1906
Photo from a painting by L. Hartz, 1930