The History of

THERE can be little doubt that no other summer fruit rivals the delicious image produced by the phrase "strawberries and cream", and just as we have come to hope for sun and warmth in June so we look forward to the strawberry season. We may not always have as much of either as we would hope, but at least we expect some.

The word strawberry evokes an image of a large, bright scarlet, succulent fruit, brimful of juice, and, rather less certainly, of flavour. It comes perhaps, as something of a surprise to realise that the development of this fruit took place, relatively speaking, not so very long ago. In fact, almost 200 years ago. It was not the result of a long, slow, painstaking, improvement of wild stocks, but a rather sudden, almost dramatic change, that happened in a few years and completely changed the meaning of the word strawberry.

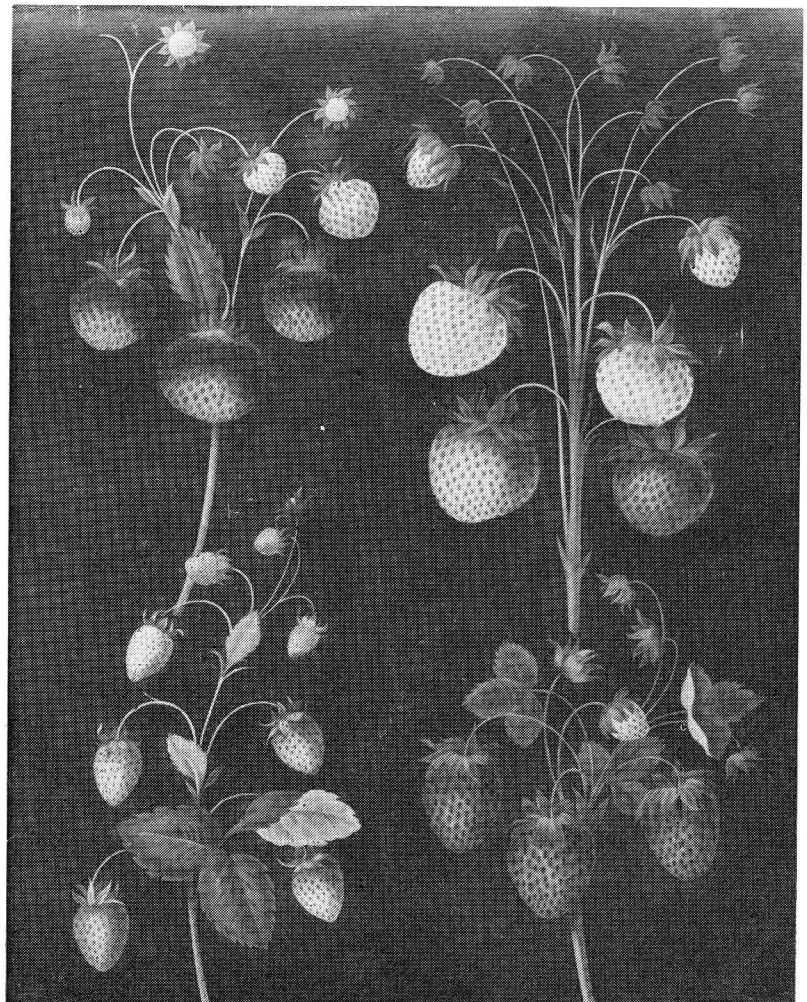
This fruit has always attracted attention, and is mentioned regularly by the early authors of books on gardens and gardening such as Parkinson, Simon Pauli and Philip Miller. It has also attracted the special attention of literate gardeners such as André Duchesne, who worked in the Royal Gardens at Versailles in the middle of the eighteenth century, and of dilettante noblemen like the Comte de Lambertye, who wrote a much more pedestrian, but painstaking and valuable account of the plant's cultivation in 1864.

Both DuHamel de Monceaux and Elisa de Vilmorin wrote accounts of its cultivation around Brest in the eighteenth and nineteenth centuries. In the early part of the nineteenth century also, full accounts were made by Barnet, who made a special study for the London Horticultural Society, and by Smith who provides a detailed record of the state of its cultivation around Edinburgh.

It is within the period covered by these writers, from the mid-eighteenth until the mid-nineteenth centuries, that the large fruiting strawberry which we know today was originated and developed. By the end of this period it became virtually the only sort cultivated at all for commercial purpases, and very much the most commonly grown type found in private gardens. Fortunately, the stages of this process can be traced quite accurately through the writings of the authors mentioned above.

Left: Fragaria vesca from John Parkinson's "Theatrum Botanicum" published in 1640 at a time when this was the most commonly grown garden strawberry

Below: Plate two of George Brookshaw's "Pomona Brittanica", published in 1812. Top left: The "hoboy" (F. elatior) which he describes as having a flavour unlike any other strawberry. Top right: the Chile showing the pale fruit which gave rise to 'Large White Chili'. Bottom left: 'Scarlet Alpine', a derivative of F. Vesca. Bottom right: one of the early hybrids called the 'Scarlet-flesh Pine', which has obvious affinities to the scarlet strawberry (F. virginiana)



The exact date of the first phase of strawberry cultivation is not known, but it ended in England and France in the last years of the seventeenth century. It depended in the simplest possible way on the collection of wild runner plants from the fields and hedgerows, which were planted in rows in the garden and fruited for a few years until they became "degenerate." Stock was then renewed from the wild. This method is described by Parkinson for England, and by Olivier de Serres for France. The flowers and pert appearance of the plant were sufficiently appreciated to earn it a place in the flower garden as well as among other fruits and vegetables.

The plants grown were usually derived from the common wild strawberry—*Fragaria vesca*, familiar enough to us all, and common throughout Europe. Other wild species were used during this time and include the "green strawberry"—*F. viridis*, which was especially appreciated in England; the "hautbois"—*F. elatior*, and the "breslinghe"—*F. collina*, frequently grown in Germany.

Towards the end of the seventeenth century, gardeners began to select special plants, and deliberately propagated the runners instead of depending upon the wild stock for replacement. At first the cultivars selected depended on major differences of fruit colour, so that very early on we find mention of a white-fruited kind. In a short while larger-fruited sorts began to be specially named, and one is mentioned in 1683 by Bonnefons in *Le Jardinier françois*.

By the time that Duchesne wrote his book in 1766 the number of distinct cvs. of the wild strawberry had risen to no less than 11, including an ever-bearing sort which fruited throughout the summer. Many of these were no more than curiosities, such as the notorious 'Plymouth' strawberry in which the carpels of the flower are replaced by small leaves;

the Strawberry

P. A. THOMPSON
Royal Botanic Gardens, Kew

or forms with variegated leaves or double flowers. However, he provides a detailed and interesting account of the commercial cultivation of a large fruited cv. of *F. vesca* called 'Fressant', after its discoverer, which formed an important part of the plantations supplying fruit to Paris. He also mentions that the price of strawberry runners varied with the reputation of the cv., indicating the existence of a number of recognisably distinct kinds at that time.

For various reasons these cvs. based on *F. vesca* lasted longer, and developed further around Paris, than in other areas where we know strawberries were grown for market, such as around Bordeaux or Brest in France and around London. In these areas plants such as the hautbois, and the "scarlet strawberry"—*F. virginiana* were more widely grown. The scarlet strawberry came originally from eastern North America, and was noticed and commented upon for its abundant fruiting by the earliest settlers. We know that it had arrived in France by 1620 when it is mentioned by Jean Robin, but for some reason it failed to become commercially popular around Paris. We learn from DuHamel de Monceaux that it was common in the fields around Brest and it was also grown on an extensive scale commercially around London. In fact it soon became the most important type of strawberry grown for market in Britain.

Another species which played an important part in some areas at this period was the hautbois — *F. elatoir*. Normally this is a dioecious species (male and female flowers on a separate plant). The extent of its popularity and level of cultivation at any time seems to have depended entirely on whether the methods of the growers in a particular district took account of this fact. For example, around Brest the strawberry plantations were usually made up of several different types of plants all growing together, ensuring adequate pollination. Under these conditions, the hautbois was a useful strawberry to grow commercially. On the other hand around Paris, where mixed cropping was not practised it was not grown successfully, and indeed the practice of weeding out the unproductive male plants in ignorance of their importance was largely responsible for crop failure. Duchesne recognised that the male and female flowers were borne on separate plants, and indeed he thought himself the first person to have observed this, and proposed a mode of cultivation to ensure an adequate level of pollination.

Book reviews

GERALD RODWAY: *Starting With Orchids.* Collingridge, 35s.

BOOKS INTRODUCING orchids to the public are produced at the rate of two to three each year. One supposes publishers know their markets, but it seems doubtful so far as the orchid world is concerned. Collingridge, who have published one of the best, *Successful Orchid Culture* by P. C. R. Rittershausen, now introduce another by Gerald Rodway, to join the lengthening list of books that may be noted for their similarity.

The book under review starts in the usual way, about myths; what is an orchid? epiphytes and terrestials; the plants; vegetative propagation; importation of orchids; species versus hybrids, and cultivation—a sequence now very familiar.

The author is an extremely skilled grower and when a year ago I learned he was preparing a book on orchids, I anticipated something different and refreshing, describing his special skills that are several and various. But the publishers had other ideas and *Starting With Orchids* is the result.

As a book it is well produced and well written. It is right for anyone interested in orchids who has not discovered other books that are similar, though at 35s. it cannot be said to be cheap. The 104 pages show the true scope, the fascination of collecting and growing orchids, and give some knowledge of their cultural needs.

The ten coloured plates by the author are excellent and reveal something of the colour range of orchids. The selection is noted for the absence of the most popular of all orchids, the cymbidium, included however, in the 16 monochrome plates. A dozen line drawings by Dora Ratman help to make clear details of cultivation and points about some different orchids.

The main generic groups are briefly but authoratitively dealt with and the final chapter would assist the beginner in making a selection of species and cultivars.

John W. Blowers

Brooklyn Botanic Garden, New York, U.S.A. *Handbook on Broad-leaved Evergreens.* 1 dollar 25 cents.

THIS is the third printing and second revised edition of a special issue of *Plants and Gardens* (Vol. 12, No. 3, 1956), published by the Brooklyn Botanic Garden. As its printing history shows, it has proved a popular publication in U.S.A. Considering how much more evergreens are made use of in America than Great Britain, this is no mean yardstick of its success.

The contents of this little handbook is set out in the form of a symposium, each chapter being contributed by an expert in his or her field. By this means the coverage of the subject is wide. Such aspects as selection of species for specific areas; studies of special groups — for example, holly, box, camellia and rhododendron; uses of mist propagation; and the value of anti-dessicant sprays for winter protection, are dealt with in a simple and informative fashion.

Although compiled specifically for the American scene, there is much of interest for any temperate country gardener. This particularly applies to Great Britain, where a beneficent climate allows us to grow practically all the plants mentioned without any winter protection.

Kenneth A. Beckett

C. E. LUCAS PHILLIPS: *Climbing Plants for Walls and Gardens.* Heinemann, London.

THE OPENING chapters of this book comprise such general topics as planning, hardiness, wall aspects, and means of support, with an account of the various problems likely to be connected with established plants on buildings. A description of the preparation of the site, planting and pruning is also described. The latter operation is described in the succeeding chapters which deal with the individual shrubs and climbers. This is the most important operation which is connected with many of these plants after their successful establishment has taken place. At times, on reading through the book there is the feeling that it should have been given even greater prominence.

As an example, it is not even mentioned with *Itea ilicifolia*, that it needs some of the old wood removed if it is to be kept within reasonable bounds and in good flowering condition in a confined space. There is a chapter each for roses and clematis while the remainder are accounted for under a general classification of "Climbers", "Twiners", "Wall Shrubs", "Annual Climbers" and "Greenhouse Climbers".

The selection of plants is good and interesting but not as complete as one might have expected. For example, there is no mention of escallonias, chimonanthus or choisya as wall shrubs. Taking the title as it stands one would be excused from mentioning these, but others such as garrya and carpenteria have been included; these are both good wall shrubs. It cannot be regarded as a complete work for the professional gardener or the knowledgeable amateur, indeed one feels that it was never intended that it should be. The standard of the photography and reproduction of the close-up illustrations is very good indeed, and greatly adds to the appreciation of this work.

G. E. Brown.

THE HISTORY OF THE STRAWBERRY

CONCLUDING THE ARTICLE BY P. A. THOMPSON OF THE ROYAL BOTANIC GARDENS KEW.

In their descriptions of the mixed plantations around Brest, Duchesne and Du-Hamel make it clear that at least three kinds of strawberry were grown. Two have already been mentioned: the scarlet strawberry and the hautbois. The third was another American species, this time from the west coast, and called by Duchesne the "frutiller".

This was the species *F. chiloensis,* which had been cultivated by the American Indians for many years and which had been brought over to Marseilles in 1716 by a Frenchman named Frézier from Santiago in Chile, where he had seen it cultivated in fields around the town. Frézier succeeded in importing five plants, no mean achievement when one considers the length and difficulties of the sea voyage in those days. He distributed them to friends and helpers and also to the Royal Gardens at the Louvre. No more is known of the species until the late 1760s when it is quite clear from Duchesne's writing that plants were widely distributed around Europe, and grown quite extensively for market around Brest.

We do not know for certain, however, whether all these plants were the progeny of Frézier's original introduction. In fact on balance this is unlikely since specimens of the plant were being grown in eastern North America by this time, and there is ample evidence of transport of strawberry plants from Canada, Virginia and Louisiana to England and France during the period. However, wherever they came from, the plant had the reputation of being exceedingly infertile, and it was only in a few areas where it was grown in company with pollinating cvs. that it succeeded in fruiting at all.

It has often been suggested that this failure to form pollen was due to the fact that all of Frézier's original plants were females. Indeed, the proposition has even been put forward that these had been deliberately selected by him in the first place, as they had been bearing fruit freely when collected. He hoped that such a selection would ensure the introduction of a prolific strain into Europe. If this were his intention, it is ironic that he came so far away from achieving it, and if the selection were at random it would have been a stroke of bad luck for all the plants to be female. On the other hand, since there is no real reason to think that all the plants in Europe were derived from this original collection, it seems more likely that the inadequate pollen production of the plants grown in Europe was a consequence of climatic conditions rather than a result of any inherent unisexuality of the plants.

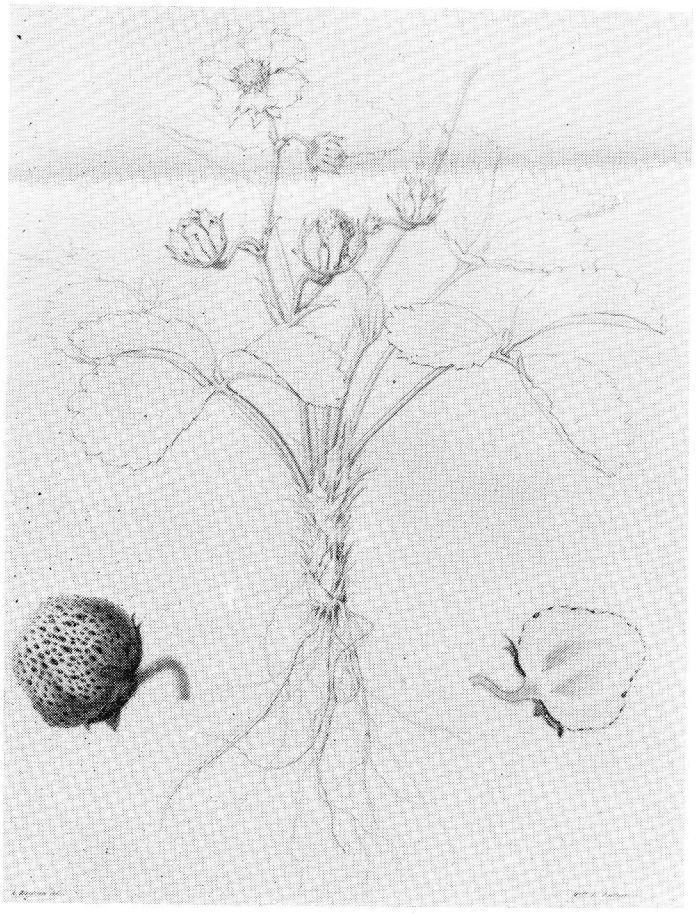
Yet by the time Duchesne wrote, the first hybrid strawberries had already been raised, and indeed at least one was included in his collection of strawberry cvs. at Versailles. He called this 'Ananas', a reference to its pineapple-like flavour and was quite clearly intrigued by its origins and relationship with other cvs. with which he was familiar.

He describes it in detail and notes that its appearance was intermediate between the scarlet and the Chilean. In this he was quite correct and there can now be no doubt that the modern hybrid strawberries are in fact derived from crosses between these two species. Unfortunately, it is not possible to tell from Duchesne's writing where the cross originated, though it is quite likely that it could have arisen independently in a number of different places.

First grown at Brest

It has frequently been suggested that this hybrid was first grown around Brest and there can be no doubt that the system of cultivation there was most favourable for the development of it. On the other hand Duchesne refers several times to crosses deliberately made by M. les Nouettes-Grou of Cherbourg between the Chilean strawberry and 'Fraise du Pays' (*F. virginiana*), from which he had sown seed in 1758 and 1759.

Duchesne records that seed obtained



An illustration from "Jardin Fruitiér du Museum" by Decaisne, vol. 9 (1862-75). It clearly shows the infertility of *Fragaria chiloensis* in which the majority of the achenes on the ripe fruit have failed to develop. The long rootstock also bears out a tradition that fruits were produced more frequently on old crowns than on young ones

One of the earliest of the modern large fruited hybrids was 'John Wilmot's Superb', shown here in an illustration from the Transactions of the London Horticultural Society published in 1826

from Nouettes-Grou in 1764 produced typical 'Ananas'-type plants when sown. From this evidence there can be little doubt that Les Nouettes-Grou was deliberately making crosses between *F. chiloensis* and *F. virginiana* and in the absence of any other evidence must have a strong claim to be considered as the originator of the garden strawberry.

However, this claim exists very largely because of the absence of an alternative, and it is most likely that hybrids arose independently in a number of places. The names of some of the very early cvs. of strawberry such as 'Bath', known to Duchesne by repute, and 'Carolina' and the 'Canterbury', also support this idea. In 1824 Barnet listed at least six cvs. as being very old. From his and other evidence, such as DuHamel's, it is certain that there were a number of others extant soon after Duchesne wrote in 1766 and possibly even at that time.

Throughout the rest of the eighteenth century and for the first years of the nineteenth, these hybrid cvs. occupied no very important place in strawberry growing. This is surprising considering the references to their large size. On the other hand, the original American species were widely grown during this period in both England and France.

In France *F. chiloensis* was grown around Brest and also Bordeaux where it was favoured for its outstanding ability to travel well, so that it was regularly sent off to the markets in Paris. Elisa de Vilmorin describes the departure of boats full of strawberries sailing from Brest for the coastal towns of southern England and northern France. Most of these would appear to have been pure or nearly pure *F. chiloensis*.

In England, on the other hand the most commonly grown plants were forms of *F. virginiana*. Indeed, when Barnet wrote in 1824 he listed no less than 26 distinct cvs. of this species. Smith also emphasises their importance in his description of strawberry growing around Edinburgh at about the same time. Even so, this period marks the peak of the culture of strawberries, derived solely from *F. virginiana*, and the beginning of the present era of large-fruited hybrids.

This change was due almost entirely to the efforts of a small number of English nurserymen who bred strawberries derived from crosses between the existing hybrids and the two American species. Men like Michael Keen, John Wilmot of Isleworth, John Williams of Pitmaston and Thomas Knight of Downton, between them raised strawberries in the early years of the nineteenth century equal in appearance and size to those we are accustomed to today. Indeed, some of their cvs. survived well into the twentieth century. The author saw plants of 'Black Prince', raised by John Wilmot in 1823, growing in Scotland in the late 1950s, and it may be possible that stocks still exist.

The pedigree of this particular cv. is given below because it illustrates particularly well the kind of parentage of other similar hybrids and introduces one or two other famous or interesting old cvs.

F. virginiana (seed from America) × *F. chiloensis*

'Old Black' × 'Large White Chili'

'Knight's Old Scarlet'

'Downton' × 'Keen's Imperial'

'Black Prince'

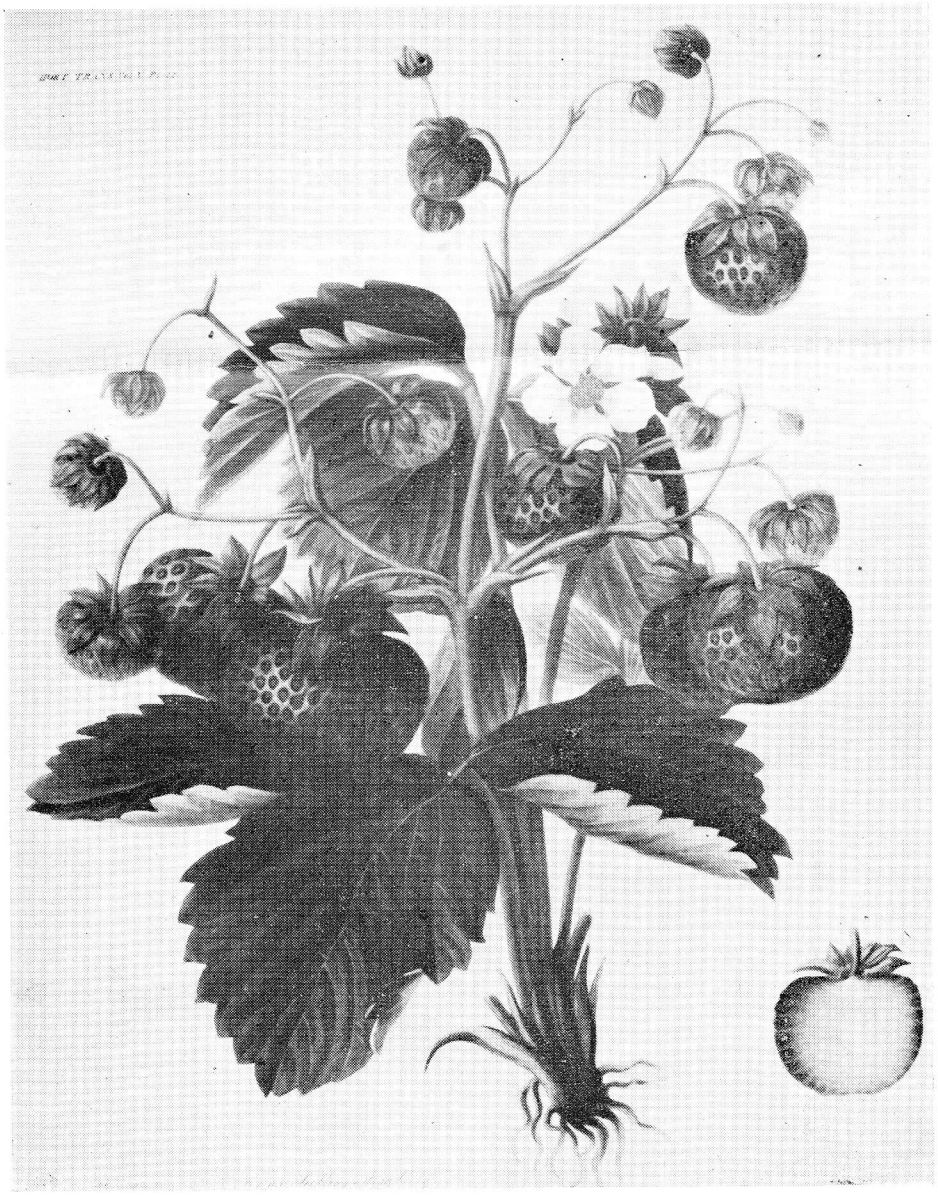
This "family tree" shows clearly the part played by the scarlet strawberry — *F. virginiana*, and the Chile strawberry — *F. chiloensis* of which the 'Large White Chili' was, even then, an old and well established cv. 'Old Black' is an interesting mystery plant known to us from its description by Barnet, who considered it sufficiently different from the scarlets, the pines and the Chilis to put it in a group by itself. It was a late fruiting, very old kind with medium sized slightly hairy berries of a dark purplish red, and noted for its superior and peculiar flavour. All trace of it seems to have been lost and we cannot even guess about its derivation. Nevertheless, its affinities are clearly close to a *F. chiloensis* × *F. virginiana* type hybrid.

Of the two parents of 'Black Prince', 'Downton' was raised by Thomas Andrew Knight, and was extremely popular and prolific for a few years. 'Keen's Imperial' was raised in 1806 by Michael Keen, but failed to become really established in cultivation. However, in 1821 a seedling from it named 'Keen's' was exhibited for the first time, exciting, Barnet says, more interest than any other recently introduced cv.

This interest was well merited, and in spite of certain defects — particularly its poor fertility — became the most widely grown commercial strawberry. It soon replaced the scarlet strawberries in England and the Chile strawberries in France. In 1826, only five years after its first exhibition, Smith records that its fruit was beginning to appear in the markets of Edinburgh. And in 1839, Poiteau records that it had started to replace 'Ananas' in the gardens round Paris.

Within a few years of its introduction, 'Keen's' and other similar hybrids, several of them raised from its seds, had almost entirely replaced all the old cvs. based on the four original species, and their derivatives. By the middle of the nineteenth century, although the names would be strange to us, the character of the plants and the taste and appearance of the fruit would not have seemed very different from the modern cvs. which we know so well.

Since that time, many famous kinds have come and gone. The development of the cultivated strawberry is still a continuing process of great interest, but the point reached, marked by the introduction of 'Keen's (Seedling)', provides a natural stopping place for this thesis. It marks the moment when the modern hybrid strawberry really arrived; providing an indisputably better and more marketable fruit than any of the natural species, or cvs. developed from them, which had been grown up till that time.



The first modern strawberry of note—'Keen's (Seedling)'