

YEAR BOOK
OF
THE RHODODENDRON
ASSOCIATION.
1935.

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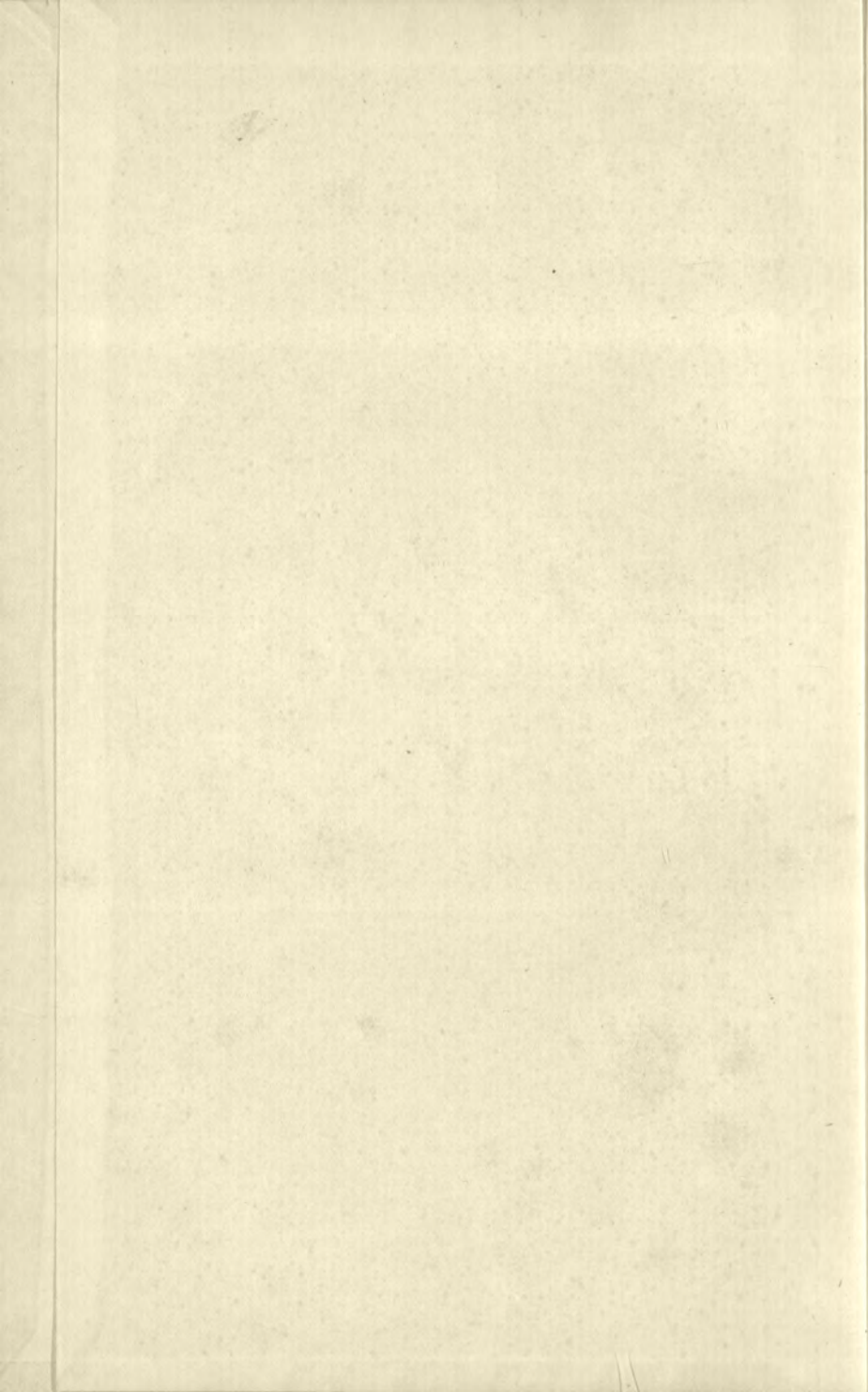
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2023



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- Preston, E. M., The Warren, Hayes, Kent.
- Price-Jones, W. R., Pedders Wood, Scorton, nr. Garstang, Lancs.
- *Puddle, F. C., The Gardens, Bodnant, Tal-y-Cafn, North Wales.
- *Putron, H. L. du, Caledonia Nursery, Guernsey.
- Raffill, C. P., Royal Botanic Gardens, Kew, Surrey.
- Ramsden-Jodrell, Mrs., Taxal Lodge, Whaley Bridge, Cheshire.
- *Ramsden, Sir John F., Bart., Bulstrode, Gerrards Cross, Bucks.
- Rayleigh, The Lady, Beaufront Castle, Hexham.
- †Rehder, Prof. Alfred, The Arnold Arboretum, Jamaica Plain,
Mass., U.S.A.
- Reid, Andrew T., Auchterarder House, Auchterarder, Perthshire.

- Reilley, C. W., Fernglen, Olinda, Victoria, Australia.
 Renshaw, Sir Charles H., Merton Hall, Watton, Norfolk.
 Renton, John T., Branklyn, Perth.
- *Reuthe, G., 109, Crown Lane, Bromley, Kent.
 Rochdale, Right Hon. Lord, The Old Hall, Highgate Village,
 London, N. 6.
 Rogers, Arthur E., Angle House, Seal, Kent.
 Rogers, Lieut.-Colonel J. M., Riverhill, Sevenoaks, Kent.
 Rose, Frederick J., Townhill Park Gardens, Bitterne, Southampton.
 Rosebery, The Countess of, Cleveland House, Newmarket.
- *Rothschild, Lionel N. de, Exbury House, Exbury, Southampton.
 Russell, L. R., Richmond Nurseries, Richmond, Surrey.
 Russon, Wm. Clayton, Loxborough Manor, Northaw, Hants.
 Ryder, Hon. Mrs. Eleanor F., Durns, Beaulieu, Hants.
 Rye, Robert W., Lockinch Gardens, Castle Kennedy, Stranraer,
 Wigtownshire.
 Salway, S., The Gardens, Petworth Park, Petworth, Sussex.
 Sander, Louis, St. André, Bruges, Belgium.
 Savage, Alfred, The Garden, Mount Congreve, Waterford, Ireland.
 Savill, Eric H., Beech Hill Lodge, The Great Park, Windsor.
- *Sayle, R. T. D., Langton's, Ottershaw, Chertsey, Surrey.
 Schneider, Dr. Camillo, Bolivarallee 9, Berlin-Charlottenburg 9,
 Germany.
 Schröder, Baron Bruno, The Dell Park, Englefield Green, Surrey.
 Schroder, Capt. W. H., Attadale, Strathcarron, Ross-shire.
 Seabrook, C. Courtney, c/o Messrs. Koster & Co., Bridgeton,
 R.F.D. 5, New Jersey, U.S.A.
- *Seaton, The Lady, Bosahan, St. Martin, Cornwall.
 Sebag-Montefiore, The Hon. Mrs. Ida Marie, Thorn, Wembury,
 Plymouth.
 Serocold, Mrs. Germaine, Three Fords, Seud, Surrey.
 Sharpe, Ronald G., Balmuir, near Dundee, Scotland.
 Shearburn, Harry, Munstead, Godalming, Surrey.
 Sherrard, Gerald O., 74, Pembroke Road, Dublin.
 Skellerup, G. W., 175, Cashel Street, Christchurch, New Zealand.

- *Slade, J., Embley Gardens, Romsey, Hants.
 Slocock, Oliver C. A., Goldsworth Old Nursery, Woking, Surrey.
- *Slocock, W. A., Goldsworth Nursery, Woking, Surrey.
 Smedley, J. B. Marsden, Lea Green, Matlock, Derbyshire.
 Smith, Mrs. H. Lindsay, Ashfold, Handcross, Sussex.
 Smith, N. Hamilton, Cheniston, Sunningdale, Berks.
 Smith, Owen Hugh, Hay's Wharf and Dock, Southwark, London,
 S.E. 1.
 Smith, Samuel, The Gardens, Penjerrick, Budock, Falmouth,
 Cornwall.
- †Smith, Professor Sir W. Wright, Royal Botanic Gardens,
 Edinburgh.
- Somerleyton, Right Hon. Lord, Somerleyton Hall, Lowestoft.
 Spender-Clay, Hon. Mrs., Ford Manor, Lingfield, Surrey.
 Spring-Rice, Mrs. Gerald, Gatesgarth, Penrith, Cumberland.
 Stair, Lieut.-Col. The Earl of, 17, Eaton Square, London,
 S.W. 1.
- *Stead, Edgar, Ilam, Christchurch, New Zealand.
 Steffen, Alexander, Pillnitz, Dresden, Germany.
- *Stern, Major F. C., Highdown, Goring-by-Sea, Sussex.
- *Stevenson, J. B., Tower Court, Ascot.
 Stewart, A. F. M., c/o Messrs. D. Stewart & Son, Ferndown
 Nurseries, nr. Wimborne, Dorset.
- *Stewart, Edward, Ferndown, near Wimborne, Dorset.
 Stewart, Miss Katherine M., Shambellie, Dumfries.
 Stirling, Hon. Mrs., Keir, Dumblane, Scotland.
- *Stirling-Maxwell, Sir John, Bart., Pollok House, Pollokshaws,
 Glasgow.
- St. Lawrence, T. J. Gaisford, Howth Castle, Co. Dublin.
 Stoker, Fred., The Summit, Golding's Hill, Loughton.
 Strathcona and Mount Royal, Lord, 14, South Audley Street,
 London, W. 1.
 Street, Fred., Heathermead Nurseries, West Chobham, Surrey.
 Swaythling, Right Hon. Lord, 114, Old Broad Street, London, E.C.
 Taylor, Darcy, The Rocks, Marshfield, Chippenham.

- Taylor, G. C., "Country Life," 20, Tavistock Street, London, W.C. 2.
- *Taylor, George, The Gardens, Bulstrode Park, Gerrards Cross, Bucks.
- Thomas, Mrs. M. V., Combe Wood, Colgate, near Horsham, Sussex.
- Traherne, Capt. Onslow, Bryngarw, Aberkenfig, Glamorgan.
- Tredegar, Right Hon. Viscount, Tredegar Park, Newport, Monmouthshire.
- Tremayne, Captain C. H., Carclew, Perran-ar-Worthal, Cornwall.
- Trotter, Noel, Frognal, Sunninghill, Berks.
- *Trotter, Richard D., Leith Vale, Ockley, Surrey.
- Tucker, W. G., 35, S.W. First Avenue, Portland, Oregon, U.S.A.
- Turner, Mrs. Charles, Old Down, Tockington, near Bristol.
- Tweedy, John, Hill Top House, Howth, Co. Dublin.
- *Tylden-Pattenson, Lt.-Col. E. C., Dashmonden, Biddenden, Kent.
- Upcher, Henry E. S., The Gables, Upper Sheringham, Norfolk.
- Vandevere, Dr. Edward G., 135, Edgewood Avenue, San Francisco, California, U.S.A.
- Van Pallant van Eerde, Baron Ph., Eerde, nr. Ommen, Holland.
- Vaughan, J. N. E., Rheola, Vale of Neath, Glam.
- *Veitch, Miss A. M., Royal Nurseries, Exeter.
- Venning, Charles E., Boscovean, Heamoor, Cornwall.
- Vivian, The Hon. Lady, Glynn, Bodmin, Cornwall.
- *Vyvyan, Col. Sir Courtenay, Bart., Trelowarren, Mawgan, Helston, Cornwall.
- Wada, K., Hakoneya Nurseries, Numazu-shi, Japan.
- Wakehurst, Right Hon. Lord, Ardingly, Sussex.
- Waley, Alfred J., Broadfield, Crawley, Sussex.
- *Wallace, R. W., The Old Gardens, Tunbridge Wells.
- Walter, R. G., c/o Messrs. R. Wallace & Co., The Old Gardens, Tunbridge Wells.
- Warburg, Sir Oscar, Boidier, Headley, Epsom, Surrey.
- †Ward, Capt. F. Kingdon, Hatton Gore, Harlington, Middlesex.
- Waring, Denton, Moorfield, Ben Rhydding, Ilkley, Yorks.

- *Waterer, F. Gomer, Whitfield Court, Knap Hill, nr. Woking, Surrey.
 Watt, Mrs. James, 7, Blackford Road, Edinburgh.
 Wells, Ben, The Nurseries, Merstham, Surrey.
 Wezelenburg, T., Hoekshee, Hazerswoude, Holland.
 Whigham, Charles F., Purston, Farthinghoe, Northants.
- *Whitaker, W. I., Pylewell Park, Lymington, Hants.
- *White, Harry, Sunningdale Nurseries, Windlesham, Surrey.
 White, John, Benmore Gardens, by Dunoon, Argyll.
 Whittall, Mrs. C. M., Grayswood Hill, Haslemere, Surrey.
- *Wickham, Mrs. Tom, 22, Down Street, Piccadilly, London, W. 1.
- *Wilding, E. H., Wexham Place, Stoke Poges, Bucks.
 Wilkinson, Arthur B. B., Drumbrae, Bantry, Co. Cork.
 Willcocks, William, The Gardens, Leith Vale, Ockley, Surrey.
 Williams, A. M., Werrington Park, Launceston.
- *Williams, E. Trevor, Dromenagh, Iver Heath, Bucks.
- †Williams, J. C., Caerhays Castle, Gorran, R.S.O., Cornwall.
 Williams, J. E., Hillside, Llandaff, Cardiff.
- *Williams, Mrs. Charles, Greenway, Churston Ferrers, Devon.
- *Williams, P. D., Lanarth, St. Keverne, R.S.O., Cornwall.
- *Wilson, Edward Kenneth, Cannizaro, Wimbledon, London, S.W.19.
 Wilson, J. E. B., Downgate, Sandhurst, Kent.
- *Wiseman, Percy, c/o J. Waterer, Sons & Crisp, Ltd., Bagshot, Surrey.
 Wood, Arthur H. E., Glassel, Aberdeenshire.
 Wood, H. J., Exbury Gardens, Exbury, Southampton.
- Wright, H. R., The Nurseries, Avondale, Auckland, S.W. 3, New Zealand.
- *Younger, Harry Geo., Kittoes, Bishopsteignton, South Devon.

CONSTITUTION AND RULES RELATING THERETO
OF
THE RHODODENDRON ASSOCIATION.

Title.

1. The title of this Association is "The Rhododendron Association."

Office.

2. The office of the Association shall be in London at such place as may from time to time be fixed by the Council of the Association.

Objects.

3. The object of the Association is to encourage, improve and extend the study and cultivation of Rhododendrons by means of publications, the holding of Exhibitions and otherwise.

Membership.

4. The Association shall consist of Members paying annual subscriptions of 21s. or, in the case of working gardeners, 10s. 6d., or such other amounts as shall hereafter be determined at a General Meeting of the Association, and the receipt and acceptance of a subscription by the Hon. Treasurer or Secretary shall, subject to election as hereinafter provided, constitute the subscriber thereof a Member of the Association.

All candidates for Membership shall be proposed and seconded by two Members of the Association and such candidature shall come before a meeting of the Council. On demand by any Member of the Council, voting shall be by ballot when one black ball in four shall exclude.

Any person desiring to commute his or her annual subscription for life may do so by making one payment of £15. 15s. in lieu of an annual subscription of one guinea, and

shall thereby become entitled to all the rights and privileges of the corresponding annual subscription.

No person shall be entitled to any of the rights and privileges of Membership until his or her subscription for the current year has been received by the Hon. Treasurer or Secretary.

The rights and privileges of Members of the Association shall be as follows :—

(a) To receive copies of such publications issued by the Association as may be decided by the Council.

(b) To exhibit, subject to the Exhibition Regulations for the time being in force, at the Association's Exhibitions and at Exhibitions held by the Association in conjunction with any other Association.

(c) To receive Members' tickets of admission to the Association's Exhibitions.

(d) To vote at all General Meetings of the Association.

Subscriptions.

5. Subscriptions shall be payable on January 1st in each year. Any Member desirous of relinquishing membership shall give notice thereof in writing to the Hon. Treasurer or Secretary not later than February 1st in any year and in default of such notice such Member shall be liable for the subscription for the current year.

Application of Income and Funds.

6. The income and funds of the Association shall be applied towards the promotion of the objects of the Association.

Executive Council.

7. The management and administration of the affairs of the Association shall, subject to these rules, be vested in a Council consisting—

(a) Of the Officers of the Association as hereinafter defined ;

(b) Of eight other Members of the Association, two of whom shall retire annually and shall not be re-eligible

for election until one year has elapsed ; this rule, as far as affects retirement, shall only become operative three years after the founding of the Association, when the names of those to retire shall be settled by ballot.

The Members of the Council referred to under (b) shall be elected as hereinafter provided, and shall hold office until the next Annual General Meeting.

Any vacancy occurring during the year may be filled by the Council, and such appointments shall hold good until the next Annual General Meeting. Five Members of the Council shall form a quorum.

Appointment and Duties of Officers.

8. The Officers of the Association who shall be elected as hereafter provided and hold office until the next Annual General Meeting, shall be the following :—

(a) A President of the Association who shall take the chair at all Meetings of the Association and of the Council.

(b) A Vice-President who shall, in the absence of the President, preside at all meetings of the Association and of the Council.

(c) An Hon. Treasurer who shall be the Accounting Officer, and shall be responsible for the payment into the Association's banking account of all moneys received by him on behalf of the Association. The Hon. Treasurer shall prepare for the Annual General Meeting a Balance Sheet and Statement of Accounts in respect of his year of office, and

(d) A Secretary who shall be responsible for all the Secretarial work of the Association and shall be Editor of the Association's publications. The Secretary shall account to the Hon. Treasurer for all moneys received by him on behalf of the Association.

The President, Vice-President and Hon. Treasurer shall be ex-officio Members of the Council and all Committees thereof.

Any vacancy amongst the Officers occurring during the year, shall be filled by the Council, and such appointments shall hold good until the next Annual General Meeting.

Election of Hon. Life Members.

9. Such persons as the Association may desire to honour may, on the nomination of the Council, be elected as Hon. Life Members of the Association, but they shall not as such be entitled to vote or take any part in the management and administration of the affairs of the Association.

Appointment of Committees.

10. The Council may appoint special Committees for special purposes. Unless otherwise directed by the Council no Committee of the Council shall have any executive powers, and no act or decision of any Committee shall be deemed to be an act or decision of the Council.

Council Meetings.

11. A meeting of the Council, of which not less than seven days' notice in writing, together with particulars of the business to be transacted thereat, shall be sent by the Secretary to each Member thereof, shall be convened so often as the Council may decide, or whenever the Secretary shall think necessary, or on a requisition in writing signed by not less than six Members of the Council stating the purposes for which such meeting is desired.

Financial Provisions.

12. The bankers of the Association shall be such bankers as the Council shall hereafter from time to time appoint. The Association's Banking Account shall be in the name of "The Rhododendron Association," and all cheques drawn on this account must be signed by the Secretary and any one other Hon. Officer of the Association.

The Reserve and Special Funds of the Association shall be invested as the Council may direct in the joint names of not less than three Members of the Association, who shall be nominated by the Council. Such investments shall not be varied or realised except with the authority of the Council.

Appointment of Auditor and Duties.

13. The Association shall at the Annual General Meeting appoint as Auditor for the ensuing year a Certified Accountant, who shall hold office for one year, but shall be eligible for re-election. The Auditor shall examine and audit the books and accounts of the Association and the Annual Balance Sheet, and shall ascertain that all payments have been duly authorised by the Council and vouched.

Exhibitions.

14. The Association shall hold at least one Metropolitan Exhibition in each year and Provincial Exhibitions when practicable, and may also hold Exhibitions in conjunction with any other Society or make special awards at any other horticultural exhibition.

The Council shall have power to make regulations for the management and conduct of such exhibitions, and such rules for judging thereat as it may think proper, and such regulations and rules shall be binding on all exhibitors.

Nominations for Election of Hon. Officers and Council.

15. The nominations for election of Hon. Life Members and Officers shall be made by the Council, which may also nominate Members of the Association for election as ordinary Members of the Council. Members of the Association may make nominations for the election of ordinary Members of the Council provided that such nominations shall be signed by not less than two Members of the Association and sent to the Secretary, together with the written consent of the nominee to act, not later than February 1st next preceding the Annual General Meeting.

Method of Election.

16. If the number of candidates for any office or membership of the Council should exceed the vacancies to be filled, the Secretary shall send to each Member of the Association, with the notice convening the Annual General Meeting, a voting paper setting out the names of the candidates in alphabetical order.

Each Member shall be entitled to as many votes as there are vacancies to be filled, but not more than one vote may be given for any candidate.

Every voting paper shall be filled in and signed by the Member voting, and returned, endorsed *voting paper*, so as to reach the Secretary at least five clear days before the Annual General Meeting. The provisions of this rule as to the mode of voting with a note as to the total number of candidates that may be voted for shall be printed on the voting papers, and any voting paper which is out of time or does not conform to this rule shall be void.

The voting papers shall be handed, unopened, to the Scrutineers (not less than two in number) appointed by the President, who shall count the same and report the voting to the Annual General Meeting.

Annual General Meeting.

17. The Annual General Meeting of the Association, of which meeting not less than 14 days' notice in writing, together with particulars of the business to be transacted thereat, shall be sent by the Secretary to each Member of the Association, shall be held at a date to be fixed by the Council in each year, and the order of business shall be as follows :—

(i.) Confirmation of Minutes of the last Annual General Meeting.

(ii.) Reception of Annual Report of the Council and the Hon. Treasurer's Statement of Accounts as audited by the Association's Auditor.

(iii.) Reception of the Report of the Scrutineers appointed by the President.

(iv.) Election of Auditor for ensuing year.

(v.) Other General Business.

Special General Meeting.

18. A Special General Meeting of the Association, of which meeting not less than seven days' notice in writing, together with particulars of the business to be transacted thereat, shall be sent by the Secretary to each Member of the Association, shall be convened by direction of the Council, or on a requisition in writing signed by not less than 25 Members of the Association stating the purpose for which such meeting is desired.

No business other than that for which the meeting has been convened shall be taken at any Special General Meeting.

All voting at General Meetings shall be either by Members of the Association in person, or, if a poll be demanded by not less than twelve Members, then in writing under such conditions as the Council may determine.

Removal of Member's Name from List of Members.

19. For the consideration of any question affecting the conduct of any Member of the Association, or any motion to disqualify a person for membership, a Special General Meeting shall, at the instance of the Council be convened, and such meeting shall have power on a vote taken by ballot by a majority of two-thirds of the Members present and voting, to remove the name of such Member from the list of Members, whereupon such person shall cease to be entitled to any of the rights and privileges of membership of the Association.

Alteration, etc., of Rules.

20. These rules shall not be added to, amended or rescinded except at an Annual General Meeting, or a Special Meeting of the Association, and then only with the consent of not less than two-thirds of the Members present and voting at such meeting.

THE RESISTANCE OF RHODODENDRONS TO DROUGHT.

That certain rhododendrons tolerate drought better than others is a commonplace, but the explanation of their differing susceptibility is not easy to arrive at. The much be-lauded axiom that "experience teaches" is of no avail. Under the best of circumstances, what does experience teach other than the practice of empiricism? Which, stand-by though it was to the practice of husbandry and art of medicine for some thousands of years, is a very pliant reed. And experience, *qua* experience, though of considerable value in the garden where it was acquired, is apt to be found wanting in a wider sphere.

Purpose of Enquiry.

This contribution, which should be looked upon as a preliminary contribution rather than as a finished study, is an attempt to explain why some rhododendrons appear protected against the effect of dryness, while others suffer badly from water deprivation. Its purpose, to act as something of a guide to those about to cultivate them; to short-circuit the weary road of trial in finding their garden's possibilities; and possibly to encourage a wider popularity than these relatively neglected plants have hitherto enjoyed.

Much of the hesitation felt before "going in for rhododendrons" is due to uncertainty as to their moisture requirements. One's endeavour is not to lull this caution to a dangerous sleep, but rather to inculcate it with aggressiveness; to convert it from a negative virtue to an active force.

Anatomical evidence inconclusive.

With such a genus as *Rhododendron*, containing so many structural forms, great variation in leaf-structure, and such differences in the habits of its members, it seemed not

unreasonable to expect that the external appearance of species would serve as a clue to their moisture necessities, and that the genus might be classified into Drought Resistant and Drought Submissive categories.

In form, rhododendrons range through almost every possibility between tiny shrublets an inch or so high and trees of fifty feet and more. Their choice of habitation varies from trees to rocks, from wind-swept mountain sides to dreary bogs, and from primeval forest to the bleakest alp. But it is perhaps in their enormous diversity of leaf-form that rhododendrons contrast most violently. Who, unfamiliar with the genus, could think that a leaf no more than one-twelfth of a square inch in area was the appanage of a plant related to another whose single leaf covered two-and-a-third square feet? As thin as paper or thick as deer-skin; smooth as glass, or rough, or pitted; glossy, or as dull as despondency; coated with wax or clothed with indumentum as tenuous as cob-web or as firm as chamois leather. Or, maybe, devoid of any covering whatever. All these, and more differences there are between the leaves of divers species. Many are lepidote; they are furnished with scales. The scales may be few and far between, or so numerous that they overlap; usually applied to the lower leaf-surface, they may exist on both; commonly visible, but occasionally hidden under indumentum. Strange, is it not, that none of these features, nor their combination, justifies us in saying with assurance "This plant will sustain a drought. That one will perish"? But so it is. However their possessions may function in their natural sphere, they seem curiously passive under a British sky. But let us particularise.

Root.

Approaching the matter with an open mind, it seemed possible that variations in root-form were related to differing sensitivities. Might not a good drought-resister throw its

roots down to the water-table in the soil? Or was it not conceivable that the property depended upon so generous a distribution of fibrous root that the ultimate drain of moisture in its neighbourhood would be extracted?

R.R. yunnanense, ponticum, orthocladum, racemosum, decorum, lepidotum, cinnabarinum, litiense, and Lindleyi were lifted from the ground, and their roots examined. The first six, all valiant in the face of drought, possessed no deeper nor more fibrous-spreading roots than the latter three, none of which are remarkable for imperturbability under the circumstance. The roots of *R.R. ponticum* and *racemosum* indeed, far from being of an outstanding fibrousness, were inclined to a thin and scrabby habit. No question of differing suction forces of specific root-hairs could enter, as none of these species have root-hairs (nor, so far as I know, has any rhododendron. Moisture is absorbed through the intermediacy of a mycorrhizal fungus).

Leaves.

Constantly a plant suffers wilting on account of excessive transpiration. A large foliage area encourages the disaster. Protection of the stomata with hairs or felt (which is but an aggregation of hairs), or by their being situated in pits, or on that leaf-surface less exposed to the sun, limits transpiration. So does curling or infolding of the leaf towards the stomatal surface, which is almost invariably the lower in rhododendrons. Apart from stomatal transpiration, loss of water occurs directly from the leaf-tissue if it be not protected by hardness of the cuticle, a coating of wax, covering of hair, or, if the function of ethereal oils is indeed protective, by their excretion from special glands on the leaf. Rhododendrons are richly gifted with these many guards, but their neglect of the armour may be gathered from the following contrasts.

The relatively large-leaved *Rhododendrons ponticum* and *decorum* withstand drought much better than the small-leaved

*R.R. oreotrephe*s and *hippophaeoides*. But *R. Fortunei*, a plant with similar foliage to *R. decorum*, suffers rather badly. Again, a drought which might spell disaster to the small-leaved *R. repens*, which incidentally is found in other positions than amongst wet rocks, is viewed with utter indifference by *R.R. racemosum* and *hirsutum*. Foliage area cannot, however, be estimated from the size of leaves alone; their number is of equal, or even greater importance. Unfortunately, this consideration does not help us. *R. fulgens*, for instance, carries a greater weight of foliage than does *R. lanatum*, *R. ficolacteum* than *R. Falconeri*, and *R. ponticum* than *R. Thomsonii*, yet the first-named in each comparison is less affected by dryness than the second.

Contemplation of the behaviour under drought of the Series *Edgeworthii*, *Falconeri*, and *Grande*, all endowed with effective-looking indumentum, jars our pre-conceptions as to the defence afforded by such coverings. We are, in point of fact, forced to regard them as we do the sable overcoats of company promoters—as evidence of the magnitude of intention rather than as guarantees of stability.

And as for the presence of wax on the stomatal, or even on both surfaces, look upon the many be-waxed members of the *Thomsonii* Series, for example, and then on the unvarnished representatives of the *Triflorum* group.

The function of those curious epidermal outgrowths known as “scales” on the leaves of many rhododendrons is a little uncertain. Many eminent botanists hold the view that their purpose is to restrain excessive transpiration. The illustrious Kerner, however, believed that they formed the essential part of a mechanism for promoting absorption of water by the leaf, in this wise. The scales (discoid glands) are fitted loosely into shallow hollows, and attached to the leaf by short stalks. They excrete a slimy, resinous material which, after absorbing water, swells and this permits them to roof-in (or floor) the cavities in which they lie. The walls of

a cavity become wet at the same time as a scale itself, and the captured layer of water is taken up by the leaf and passed into the vessels, in juxtaposition to which the scales are invariably situated. Whichever opinion is held, the utility of scales appears directed towards assisting their owner to its necessary water. Whether we look upon them as moisture preservers, or as moisture trappers, or as subserving both functions, as they may very well do, they are marvellously adapted to the purpose. What is more, lepidote rhododendrons, on the whole, resist drought better than their scaleless brethren. But only "on the whole." While the sensitive *Arboreum*, *Auriculatum*, *Barbatum*, *Campanulatum*, *Falconeri*, *Grande*, *Lacteum*, and *Thomsonii* Series are elepidote, so also are the reasonably tolerant *Ponticum*, *Fortunei*, *Neriiflorum* (s.s. *Sanguineum*), and *Taliense* Series, while the members of the *Cinnabarinum* Series, armed with scales, lose all distinction of deportment under the stress of aridity. Paradox, the reader will observe, still rules the board.

Influence of Natural Environment.

Time and again, while writing these paragraphs, I have been conscious of prospective criticism. "The contrasts drawn," it says, "are often of plants from widely different habitats. Is it fair to compare a rhododendron native to the European Alps with another from the monsoon area of Asia, so far as their response to external conditions is concerned?" A reference to the habitats of Asiatic rhododendrons astonishes us with the fact that spirited drought-resisters are found in close proximity to their feebler kin. Naturally, in looking into this point, it is important to appreciate the part played by the agencies which conserve water in the soil, as well as the quantity supplied. One asks, therefore, if rhododendrons in the same area enjoy the same amount of shade? Frequently, of course, they do not. Forrest, however, made many significant observations relative

to the matter. That *R. oreotrephes* is found on the eastern side of the Lichiang Range at 11,000 to 12,000 feet, inhabiting grassy mountain slopes **in company with** *R. adenogynum*, *R. cuneatum*, *R. prostratum*, *R. calcicolum*, and *R. Wardii*; that *R. lepidotum* is **associated** with *R.R. crassum*, *bullatum*, *yunnanense*, *ciliicalyx*, and *chartophyllum* var. *praecox* on cliffs in the gorges of the western flank of the Tali Range at 8,000 to 10,000 feet; that *R. campylogynum* grows as an **under plant** among such rhododendrons as *R.R. neriiflorum* and *haematodes*. Also, he "found it (*R. campylogynum*) abundant on the western flank of the Tali Range in shady places amongst cane and scrub."

Now while *R.R. lepidotum*, *prostratum*, *calcicolum*, *campylogynum*, *cuneatum*, and *yunnanense* are looked upon as species extremely tolerant of drought, and as likely to thrive in exposed positions in this country, we do not so regard *R.R. adenogynum*, *Wardii*, *crassum*, *bullatum*, *ciliicalyx*, and *neriiflorum*.

There are records too of such rhododendrons as *decorum*, *racemosum*, and *lutescens* (all good resisters in cultivation) growing in thickets in western China, where both evaporation from the soil and transpiration from the foliage is limited by the shade of neighbouring shrubs.

We are therefore justified in concluding that rhododendrons which require shade in Great Britain do not invariably frequent shady situations in nature, and that species known to be tolerant of exposure and drought in our gardens are not confined to corresponding positions under their natural environment. If this indicates anything, it means that their natural surroundings have not impressed them with any fixed preference in this direction. In other words, that their hereditary traits (whatever they may be) must be stronger than the influence of environment.

A resort to analogy and theory is always a risky business, but it appears, to my limited vision, the only course left open.

Indeed, it is unavoidable in approaching the question from the angle which now suggests itself.

Geological Succession of Plants.

Palaeobotanists tell us that the flowering plants of at least the Northern Hemisphere had their beginning in the northern latitudes of that hemisphere, and were driven southwards by the gradual fall in temperature which began in the Eocene and reached its extreme in the Glacial Period. There were no breaks in continuity. As one climatological type of flora withdrew, another, colder type took its place. Nor was there any change in its essential character. New species, more suited to the changes of climate than their predecessors, retained a close alliance with the latter. Upon the evidence of the nature and location of geological deposits, and on the affinities, or even identity of Tertiary and modern plants depend present day conceptions.

Eocene fossil plants found in northern Europe show close relationship with modern tropical plants, while the Cretaceous, Eocene, and Miocene beds in the Arctic reveal the remains of floras which possessed marked affinities with the sub-tropical and temperate plants of to-day.

Naturally, evolution of new species must have occurred in other places than within the original zone. Anywhere on the southward path where conditions were propitious, or rather, perhaps, where the call of circumstance was urgent, new plants came into being. Yet not entirely new; a prehistoric botanist, if one can imagine such a being, would have had no difficulty in telling their ancestry.

In addition to the increasing cold, a further series of events enormously influenced plant distribution. This was the world-wide building of the great mountain chains which commenced in the Eocene and attained a culmination in the early Miocene. In Europe and western Asia these run from west to east; in eastern Asia their direction is oblique, while

in America it is almost north and south. Although certain plants in Europe and western Asia, imbued with the maxim that "delays are dangerous," managed to cross the fatal area before the menace of the mountains became serious, the mass of their compatriots, and certainly those with exotic affinities, were entrapped between an upper millstone of advancing cold and a lower of untraversable mountains, and exterminated. On the other hand, affinity continued between the floras of the far east and America. Therefore, to this hour, representatives of the vegetation which flourished in the Arctic and northern Europe in the remotely distant Cretaceous and Eocene times range from Australia to China, from South America to the north of that continent, and from South Africa to the Mediterranean shore.

The following scheme is intended to represent the course of events :—

SCHEME OF GEOLOGICAL SUCCESSION IN RELATION TO PLANT MIGRATION FROM
THE LATE CRETACEOUS PERIOD.

Geological Period.	Climate and Type of Flora. Arctic. Europe.	Movement of Flora.	Habitats of present-day representatives of Northern prehistoric plants.
Cretaceous	Subtr. Trop. Subtr. Trop. See Col. 4.	None.	AUSTRALIA. <i>Proteaceae, Araucaria, Dammar, Sapindus, Zizyphus, etc.</i> INDO-MALAYA. <i>Dammar, Aralia, Artocarpus, Zizyphus.</i> NEW GUINEA. <i>Araucaria, etc.</i> PHILIPPINES. <i>Dammar, etc.</i> CHINA. <i>Aralia, Artocarpus, etc.</i> AFRICA. <i>Proteaceae, Zizyphus, etc.</i> S. AMERICA. <i>Proteaceae, Araucaria, Zizyphus, etc.</i>
Eocene (Mountain Building begins)	Warm > Subtr. Warm to Temp. See Col. 4.	South.	AUSTRALASIA. <i>Libocedrus, Grewia, Vitis, etc.</i> NEW GUINEA. <i>Libocedrus, etc.</i> CHINA. <i>Libocedrus, Nyssa, Vitis, Koelreuteria, Rhus, Magnolia, etc.</i> INDIA. <i>Nyssa, Vitis, etc.</i> JAPAN. <i>Acer, Magnolia, etc.</i> AFRICA. <i>Rhus, Grewia, etc.</i> EUROPE. <i>Acer, Rhus, etc.</i> N. AMERICA. <i>Taxodium, Sequoia, Magnolia, Juglans, Rhus, Aceratus, Nyssa, etc.</i> S. AMERICA. <i>Libocedrus, Juglans, etc.</i>

SCHEME OF GEOLOGICAL SUCCESSION IN RELATION TO PLANT MIGRATION FROM
THE LATE CRETACEOUS PERIOD—*continued*.

Geological Period.	Climate and Type of Flora. Arctic. Europe.	Movement of Flora.	Habitats of present-day representatives of Northern prehistoric plants.
TERTIARY	Miocene (Mountain Building reaches climax early in period)	Temp. > Subtr. > c. tem. w. tem. temp. w. tem. See Col. 4.	S. ASIA. N. ASIA. EUROPE. N. AMERICA. <i>Quercus</i> , etc. <i>Quercus</i> , <i>Platanus</i> , <i>Populus</i> , <i>Tilia</i> , <i>Fagus</i> , <i>Magnolia</i> , etc. <i>Quercus</i> , <i>Fagus</i> , <i>Populus</i> , <i>Acer</i> , <i>Tilia</i> , etc. <i>Quercus</i> , <i>Tilia</i> , <i>Acer</i> , <i>Magnolia</i> , etc.
	Pliocene	c. tem. > s. arc.	Not sufficient data.
QUATERNARY	Glacial (13 stgs.)	arc. with temp. ins.	
	Recent	arc. temp.	

Abbreviations. subtr. = subtropical; trop. = tropical; tem. or temp. = temperate; c. = cold; > = cooling to; arc. = arctic; s. arc. = subarctic; ins. = intermissions; N. exs. = northerly excursions. Italics in Column 2 refer to types of Flora.

If the present distribution of any great genus of Northern Hemisphere plants be plotted out on a globe, it is seen to be fan-like, and to radiate from a northern focus. A little water poured on the upper pole of an orange spreads as it runs down so as to include a large arc of the fruit's equator; thus it has been with plants. Leaving a comparatively circumscribed area in the higher latitudes, and increasing like nomads during their journey south, they eventually colonised in places thousands of latitudinal miles apart under the primary influence of the earth's shape. Longitudinal distance from its place of origin, and wideness of latitudinal dispersal of a species, a series, or a genus must consequently be indicative of its age. A narrow distribution, nevertheless, cannot be looked upon as necessarily a sign of youth, for plants, and races of plants, die out as inevitably as other forms of life.

In connection with this very rough outline of geological sequence two particulars should be stressed. First, the extreme gradualness of the change from hot to cold. The mind recoils before the immensity of geological time; it is too vast for comprehension. We have acquired the habit of looking at time in historical perspective. The Greeks, for example, in the time of Alexander, regarded the pyramid of Cheops as a monument of inconceivable antiquity. We, in our turn, speak of Alexander himself almost as of a mythical being. Yet from the laying of the Great Pyramid's first tier until the present only 5,600 years have run their course. Using familiar terms of comparison, but allowing them a different value, let us imagine a man was born at the beginning of the Tertiary Period, and has now reached the age of 60. His birthdays are a million years apart. His "days" represent 2,700 of our years. The Great Pyramid, in his regard, was begun and completed some 48 "hours" ago. The entire history of man, from the *Pithecanthropos* stage onwards, has transpired in the past 12 "months." Had this patriarch been

interviewed before the Glacial Period, he would have denied that any marked change had occurred in the vegetation of the north. The slowness of alteration and the continuity of the flora had masked its transformation. If he had been pressed, he might have admitted, after a moment's thought, that "times *had* changed since he was a boy," but it was difficult to say just how and when.

The second particular is correlated to the increasing cold. As the temperature fell atmospheric humidity would also decrease. At the beginning of the Eocene the rainfall was generous in the northland, but at the end of the Pliocene no larger than now. Its diminution, in fact, was as gradual as the fall in temperature.

May the Needs of Rhododendrons be referred to their Geological age ?

Proof of the existence of rhododendrons in Tertiary times is scanty. Fossil remains of *R. ponticum* have been found in interglacial intercalations in south-west Austria. What are we to make of this solitary fact? Its position in the rock suggests that the *Rhododendron* was frozen and fixed *in situ*, though the possibility of its corpse, enclosed in a sarcophagus of boulder clay and carried there by glaciers for burial, is not out of the question. In any case, it may be fairly assumed that *R. ponticum* was a pre-glacial development, and this is supported by the width and character of its present distribution; *vide infra*. As it is more than improbable that this species is the primeval ancestor of its race, and as the dispersal of rhododendrons generally bears such a striking resemblance to that of Cretaceous and Tertiary plants proven to be of northern origin, are we not justified in thinking that they, too, inhabited the northern lands in pre-glacial epochs? That they took part in the great migration in the same slow, decisive, and continuous way? And that their evolution

went on as uninterruptedly? That the Cretaceous and early Eocene developments, by virtue of their greater age, eventually reached more southern homes than did later creations which, through changing environment as time advanced, became more and more inured to cold and dryness? And may we not concede that their facility in colonising was at least equal to that of contemporary plants, inasmuch as we find foci of their modern representatives marking the lines of emigration; so far, at any rate, as the advances and recessions of the Glacial Period has permitted?

We are now confronted with a thesis embracing the speculations:

(1) That Rhododendrons were evolved in the north from the Cretaceous until towards the end of the Tertiary Period.

(2) That they were dispersed from thence by gradually increasing cold and dryness.

(3) That the older (Cretaceous and early Eocene) types (which, it will be remembered, were evolved in a warm and moist climate) attained the limits of southern distribution, while the Pliocene rhododendrons, at the other end of the time-scale, only travelled, if the fluctuations of the Glacial Period are taken into account, a comparatively short distance from the cradle of their race. Those of intermediate evolution (late-Eocene to late-Miocene) would reach intermediate stations.

“Distance,” in this connection, is to be more liberally interpreted than as the linear measurement between two points. It must, in fact, be considered in terms of temperature, and such a translation does not correspond to a spatial dimension. For instance, *R. lapponicum* (Lapland), *R. kamtschaticum* (Kamtschatka), and *R. nivale* (Sikkim), are situated respectively 4,690, 3,850, and 1,960 miles from the equator, yet their “thermal distances” (if such an expression be permissible) from the equator are equal in winter, while

in summer *R.R. lapponicum* and *kamtschaticum* are actually further from the North Pole, in terms of temperature, than is *R. nivale*.

(The term "Thermal distance" is intended to indicate the difference in temperature between two points. Isothermal lines give trans-longitudinal, sea-level temperatures. They consequently indicate a gradual increase of heat as the equator is approached. As each rise in altitude of approximately 330 feet reduces the temperature of a given situation by 1° F. a "Thermal point of distance" may be arrived at by reducing a temperature of an isotherm in accordance with the altitude of any situation. It is convenient to express such "distances" in temperature degrees with an appropriate symbol, such as 10° F. Td. which would indicate "ten degrees Fahrenheit Thermal distance.")

Though the general proposition that older pre-glacial rhododendrons experienced the most southerly dispersal may be assumed to hold good (if our premises are sound), the statement requires some qualification. Even though a species was forced to the equatorial zone in consequence of one of the advances of Glacial activity, the retreat of the latter might oblige the species either to retrace a portion of its way, or to proceed still further south in quest of a suitable haven. Only those rhododendrons which were the very earliest of their race, or their close descendants, could tolerate the temperature of the equator permanently. Thus it may very well be that the direct posterity of the oldest species inhabit Sumatra, Borneo, and the Celebes; all equatorial lands. And that those a little younger, say of the Eocene, have populated more southern territories; Australia, for example.

We must now apply these theories on the past to the facts of the present, and ascertain if those species which are actually tolerant of drought in cultivation are those which, according to our concept, were evolved late in the Tertiary, and their progeny.

Application of Theory to Rhododendrons in Cultivation.

As the seriation of rhododendrons has been built almost entirely upon their structural peculiarities, it cannot be expected that the various members of a series are coeval in age, consite in distribution, or alike in habits. At the same time, as these members are presumably descended from an ancestor of sufficiently marked character (both in build and propensities) as to oblige posterity to bear its sign, a series may be considered to possess properties. These will be exaggerated or reduced in its components in accordance with their age, but the components will possess a sufficiently general resemblance to admit of their being grouped under a "tolerance" category. Therefore, in a questionnaire sent to certain well-known rhododendrologists, the properties of series rather than of species were inquired into as being more likely to yield wider information. Facts were sought from Hampshire to Perthshire ; from East Anglia to Wales and Western Scotland. The gist of the replies given in response to a question asking which Series of Rhododendrons were found tolerant of drought will be found in the first two columns of the subjoined list. The other columns show the extent of their natural distribution, and their type.

SERIES.	Per cent. of gardens in which its members are drought tolerant.	Natural Distribution.	Climatological Type.
Anthopogon ...	17	Afghanistan to E. Asia ...	All Alpine.
Azalea Sub-s. Canadense	25	Japan eastwards to N. America	No precise data Probably Alpine and sub-Alpine.
Campylogynum ...	25	Sikkim to Yunnan. (Allied to Glaucum)	Almost entirely Alpine.
Cephalanthum ...	17	N.E. Burma to N.E. Siberia	Do. do.
Ferrugineum ...	17	Western to Eastern Europe ...	Alpine.
Fortunei ...	25	Bhutan to Hupeh ...	Temperate to Alpine.
Glaucum... ...	17	Sikkim to Yunnan ...	Alpine.
Heliopsis ...	17	N. Burma to Kansu. (Allied to Triflorum)	Almost entirely Alpine.
Lapponicum ...	58	Northern N. America, N. Europe, Mongolia, N. and W. China, E. Asia, Himalaya	Alpine.
Lepidotum ...	17	Kashmir to Yunnan. (Aff. with Glaucum) (Tends towards Lapponicum)	Sub-Alpine to Alpine.
Neriiflorum sub-s. Neriiflorum. (R. sperabile)	17	N.E. Burma, S.E. Tibet, W. Yunnan	Alpine.
Neriiflorum sub-s. Sanguineum	17	N.E. Burma, S. Tibet, W. Yunnan	Alpine.
Ponticum ...	33	Spain, Caucasus, Asia Minor, Armenia, Mongolia, Manchuria, Siberia, Japan, Formosa, C. China, N.W. and E. Nr. America	Sub-Alpine to Alpine.
Saluenense ...	25	N.E. Burma to Yunnan. (Tends towards Lapponicum)	Alpine.
Taliense ...	17	Lhasa to Shensi. (1,200 miles in E.N.E. by E. direction)	Almost entirely Alpine.
Trichocladum ...	17	N. Burma, S. Tibet, W. Yunnan. (Allied to Azalea)	Alpine; rarely sub-Alpine.
Triflorum ...	42	Afghanistan to Japan ...	Low sub-Alpine to Alpine.

While scrutinising the first two columns, it should be borne in mind that every collection of rhododendrons does not contain the same species; otherwise there is little doubt that certain percentages would have been higher; notably those against the Series *Cephalanthum*, *Ferrugineum*, *Glaucum* and *Ponticum*.

The next list is of species under personal observation. All have supported drought during the past two seasons well; some better than others. The latter are denoted by plus signs. None have been artificially watered. All are growing in a lime-free clay-and-silt soil in S.W. Essex. The total rainfall in 1933 was 17.9 inches and in 1934, from January to September (nine months), 15.55 inches.

Species.	Series.	Aspect.	Association.
R. ponticum + ...	Ponticum ...	All	Alone. Shrubs.
R. Smirnowii ...	Do. ...	N.E.	Quercus palustris.
R. Ungernii ...	Do. ...	N.E.	Rhododendrons.
R. racemosum ++	Virgatum ...	N.E.; N.W.	Alone. Berberis. Rhododendrons. Holly. Crabapples.
R. aperantum ...	Neriiflorum s.s. Sanguineum	N.E.	Lupins.
R. apodectum ...	Do. do.	N.E.	Similar species.
R. scyphocalyx ...	Do. do.	N.E.; N.	Do. do.
R. sperabile ...	Neriiflorum s.s. Neriiflorum	N.E.; N.W.	Do. do. or alone.
R. myrtilloides ...	Campylogynum	N.; N.W.	Alone.
R. calostrotum ...	Saluenense ...	N.E.; N.W.	Dwarf species.
R. keleticum + ...	Do. ...	N.; N.W.	Alone; dwarf species.
R. saluenense ...	Do. ...	N.E.	Dwarf shrubs.
R. chartophyllum v. praecox +	Triflorum ...	S.W.	Cherries; shrubs.
R. Davidsonianum	Do. ...	S.E.	Shrubs.
R. yunnanense ++	Do. ...	S.E.; S.W.	Same species; shrubs.
R. decorum + ...	Fortunei ...	Many	Shrubs and alone.
R. brachyanthum ...	Glaucum ...	Open	Same species.
R. hypolepidotum ...	Do. ...	N.	Dwarf species.
R. cantabile ...	Lapponicum ...	N.; N.W.	Alone; dwarf species.
R. fastigiatum ...	Do. ...	N.W.; N.E.	Do. do.
R. impeditum ...	Do. ...	N.N.W.	Same species.
R. muliense ...	Do. ...	S.W.	Taller hybrids.
R. russatum ...	Do. ...	N.E.	Dwarf species.
R. scintillans ...	Do. ...	Open	Alone.
R. rhodora ...	Azalea s.s. Canadense	W.	Same species.
R. Schlippenbachii	Do. ...	N.E.	Dwarf shrubs.
R. hirsutum + ...	Ferrugineum ...	Open	Same species.
R. mucronulatum +	Dauricum ...	N.E.	Shrubs.

The factor of competition must always be kept in mind when judging drought resistance in cultivation. A species which exhibits the property to a marked degree when isolated, or in the company of its fellows, may fare badly in competition with tall and surface-rooting shrubs.

Taking the lists as they stand, however, they demonstrate that

(1) Alpine rhododendrons are the most tolerant of drought.

(2) Although small-leaved species are outstanding, they are not alone in being tolerant of dryness. At the same time, though the fact is not brought out in the Tables, a fewer number of species in a large-leaved drought-resistant series have the property than in a small-leaved series.

(3) That although a series containing many drought-tolerant species may be confined in distribution to a narrow area, it can usually claim relationship with a series similarly endowed and of wide dispersal.

Conclusion.

We have found that the behaviour of rhododendrons in gardens bears out our previous conjectures in rather a remarkable manner. The writer is well aware that such a correspondence does not constitute proof, but, until the hypothesis is displaced, it may serve as a sign-post on the much-debated road of cultivation.

Fred Stoker.

Works referred to during the preparation of this contribution :—

"Species of Rhododendron," edited by J. B. Stevenson, Rhododendron Society, 1930.

"Rhododendrons," by J. G. Millais, 1st and 2nd Series, 1917-1924.

"Trees and Shrubs hardy in British Isles," by W. J. Bean, 1919, 1933.

"Palaeobotany," articles, or in "Encyclopaedia Britannica," 1929.

"Cyclopaedia of Horticulture," edited by L. H. Bailey; articles on "Rhododendrons," 1933.

"Flora Lapponica," G. Wahlenberg, 1812.

"Flora of Kamtschatka and adjacent Islands," E. Hultén, 1928.

"Natural History of Plants," Anton Kerner von Marilaun, London, 1895.

RHODODENDRON TRIALS AT EXBURY.

The rhododendron trials at Exbury were continued in 1934 and numerous visits were made by the Committee during the flowering season. The following awards were recommended to the Council of the Royal Horticultural Society, who have accepted the recommendations of the Committee :—

First Class Certificate.

Mrs. G. W. Leak (Koster).—Flowers pink with prominent brown purple blotch, large compact truss 16-18 flowers in a truss. Leaves dark green 5-6 inches long, $1\frac{1}{2}$ - $2\frac{1}{2}$ inches wide, oblong-lanceolate, upright open habit.

Awards of Merit.

Dairymaid (W. C. Slocock).—Habit compact. Leaves dark green 5-6 inches long, $1\frac{1}{2}$ -2 inches wide. Flowers lemon yellow tinged pink, pink blotch, compact truss.

Edith Mackworth Praed (Koster).—Leaves dark green, oblong lanceolate, 6-7 inches long. Flowers cherry scarlet, 14-16 in a truss, truss rather loose. Habit of plant, upright and open.

Lady Bligh.—Leaves 4-5 inches long and 2 inches wide, dark green. Flowers strawberry red, corolla flat, 3 inches wide, compact truss with 12-15 flowers. Semi-compact habit.

Unique (W. C. Slocock).—Leaves 2- $2\frac{1}{2}$ inches long, $1\frac{1}{2}$ -2 inches broad, dark green above. Flowers pale yellow, good truss. Habit of plant compact.

Valewood Pink (W. C. Slocock).—Leaves light green, 4-5 inches long. Flowers shell pink, deeper margin on pedicels $1\frac{1}{2}$ -2 inches long and 9-10 flowers in an open truss. Habit compact.

Further rhododendrons have been presented for the trials by Messrs. Cheal, Slocock, Waterer Sons & Crisp and the Knap Hill Nursery. New hybrids were also acquired from Messrs. Koster, who entered some azaleas as well. In the autumn rhododendrons were received from Messrs. Van Nes.

Owing to the inaccessibility of Exbury and in spite of exceptional trouble taken by members of the Committee to attend the meetings, it has been thought advisable to strengthen the numbers of the Committee. The Committee is now made up as follows :—

Lord Aberconway.

Mr. W. J. Bean.

Mr J. J. Crosfield.

Lord Digby.

Mr. T. Hay.

Mr. H. Hillier.

Captain R. C. H. Jenkinson.

Mr. W. R. Oldham.

Mr. F. J. Rose.

Mr. Lionel de Rothschild.

Mr. J. Slade.

With Mr. R. Findlay, Jnr., as reporter.

RHODODENDRONS WHICH RECEIVED AWARDS IN 1934.

Name.	Description.	Award.	Date.
Albatross (Rothschild)	R. discolor × R. Loderi "Venus." Flowers delicate pink	A.M.	June 12
argyrophyllum (Loder)	Flowers shell pink	A.M.	May 1
Avalanche (Rothschild)	R. Loderi × R. calophytum. Flowers white, magenta- rose blotch.	A.M.	April 17
Balzac (Rothschild) (Azalea)	Flowers deep orange	A.M.	May 29
Basilisk (Rothschild) (Azalea)	Flowers deep yellow flushed salmon pink on back and margins, deep orange blotch	A.M.	May 29
Bonito (Rothschild) ...	R. discolor × R. Luscombei. Flowers pale blush, maroon spots	A.M.	June 12
Berryrose (Rothschild) (Azalea)	Flowers deep salmon fading pinkish-salmon	A.M.	May 29
Bibiani (Rothschild) ...	R. Moser's Maroon × arboreum Kermesinum. Flowers bright scarlet, few maroon spots	A.M.	May 1
caloxanthum (Rothschild)	Flowers orange yellow	A.M.	May 1
chrysodoron (Aberconway)	Flowers yellow	A.M.	Feb. 20
crebreflorum	Flowers white tinged pink	A.M.	May 1
Cunningham's Sulphur (White)	Flowers yellow	A.M.	May 1
Elliottii (Crosfield) ...	Flowers deep blood red, spotted	A.M.	May 29
Fabia (Aberconway) ...	R. Griersonianum × R. dich- roanthum. Flowers orange scarlet	A.M.	June 12
Firetail (Crosfield) ...	R. Britannia × R. eriogynum. Flowers deep crimson, faintly spotted	A.M.	May 29
Gumpo (Reuthe and Ingram) (Azalea)	Flowers white, yellow markings	A.M.	June 26

Name.	Description.	Award.	Date.
Hotspur (Rothschild) (Azalea)	Flowers deep orange scarlet...	A.M.	May 29
impeanum (R.B.G., Kew)	R. impeditum × R. Hanceanum. Flowers lilac	F.C.C.	May 8
imperator (Swaythling)	Flowers rosy purple	A.M.	May 1
Johnstoneanum (Spender Clay)	Flowers creamy white, yellow blotch at base	A.M.	May 8
Mary Swaythling (Swaythling)	Flowers soft yellow. R. Fortunei × R. campylocarpum	A.M.	May 1
rhabdotum (Rothschild)	Flowers creamy white with red stripes on corolla	F.C.C.	July 10
Sarita Loder (Loder)	R. Griersonianum × R. Loderi. Flowers deep rose	A.M.	April 17
scintillans (Rothschild)	Flowers lavender blue	F.C.C.	May 1
Snow Queen (Knap Hill Nursery)	R. Halopeanum × R. Loderi. Flowers white, small ruby markings	A.M.	May 1
Stewartianum (Rothschild)	Flowers ranging from pure white to soft primrose yellow, others flushed with rose and even deep crimson	A.M.	March 20
Sussex Bonfire (Lady Loder)	R. haematodes × R. Cornish Cross. Flowers deep blood red.	A.M.	May 1

RHODODENDRON STUD BOOK.

The Stud Book this year has been enlarged and at the present time consists of:—

1. All primary crosses, *i.e.*, between two species.
2. Any cross of which one parent is a species.
3. All hybrid rhododendrons that have received Awards of Merit or First Class Certificates from the Royal Horticultural Society since 1923.

In addition, any future hybrid rhododendrons receiving Awards of Merit or First Class Certificates shall be entered: also any hybrid from a rhododendron registered in the Stud Book and another rhododendron either so registered or which is eligible for registration or which is a species.

The Secretary will be pleased to receive names for registration of any rhododendrons which meet the foregoing conditions; they should, however, be entered by the raiser and must have flowered, and a description of the flower must be sent with the entry. These names will in due course be considered by the Committee for registration.

Every plant which receives an Award of Merit or a First Class Certificate shall be entered even though it is only a variety of a cross already entered.

RHODODENDRON HYBRIDS.

TABLE I.

Name.	Parentage.	Raiser or Exhibitor.
A. Gilbert ...	campylocarpum × discolor ...	Lowinsky, 1925
Abalone ...	campylocarpum × callimorphum...	Rothschild
Abbot ...	Thomsonii × Delavayi ...	Rothschild
Adder ...	Thomsonii × diphrocalyx ...	Rothschild
Adelaide ...	Aurora × Thomsonii ...	Rothschild
Adjutant ...	neriiflorum × sperabile ...	Rothschild
Advie ...	Cornubia × diphrocalyx ...	Rothschild
Agnes Lamont...	Loder's White × Thomsonii ...	R.B.G., Edinburgh
Aida ...	George Hardy × auriculatum ...	Rothschild, 1935
Akbar ...	King George × discolor ...	Rothschild, 1934
Albatross ...	Loderi × discolor ...	Rothschild, 1933
Alcesta ...	burmanicum × lutescens ...	McLaren, 1933
Alice Mangles ...	Griffithianum × ponticum ...	Mangles, 1882
Alix ...	barbatum × Hookeri ...	Rothschild
Alpaca ...	Sir Chas. Lemon × neriiflorum ...	Rothschild
Altaclarenses ...	catawbiense-ponticum × arboreum	Gowen, 1831
Alvinda ...	Ivery's Scarlet × Loderi ...	McLaren, 1933
Amalfi ...	Cornubia × calophytum ...	Rothschild
Amaryllis ...	White Pearl × haematodes ...	Wallace, 1934
Amaura...	Penjerrick × Griersonianum ...	McLaren, 1933
Amba ...	racemosum × burmanicum ...	McLaren, 1933
Ambrose ...	Queen Wilhelmina × chaetomallum	Rothschild, 1935
Amkeys...	ambiguum × Keysii ...	Magor, 1926
Amor ...	Griersonianum × Thayerianum ...	Stevenson, 1933
Androcles ...	arboreum × calophytum ...	Rothschild
Angelo ...	Griffithianum × discolor ...	Rothschild
Annabella ...	campanulatum × Loderi ...	Rothschild, 1933
Anne ...	Thomsonii × ? ...	Messel, 1928
Antonio...	Gills' Triumph × discolor ...	Rothschild
Apache ...	Gill's Triumph × Thomsonii ...	Rothschild
Aprilis ...	ponticum × dauricum ...	Herbert, 1843
Arab ...	Williamsianum × sperabile ...	Rothschild
Arbad ...	arboreum × adenogynum ...	Magor, 1926
Arbcamp ...	arboreum × campylocarpum ...	Magor, 1928

Name.	Parentage.	Raiser or Exhibitor.
arbutifolium ...	minus × ferrugineum ...	? 1917
Argiolus ...	concinnum × Augustinii ...	McLaren
Argosy ...	discolor × auriculatum ...	Rothschild
Ariel ...	discolor × Memoir ...	Rothschild, 1934
Aries ...	Thomsonii × neriiflorum ...	Ramsden, 1932
Arma ...	dichroanthum × repens ...	McLaren
Arthur Osborn...	didymum × Griersonianum ...	Kew Gardens, 1933
Aruna ...	Penjerrick × Wightii ...	McLaren, 1933
Astarte ...	dichroanthum × Penjerrick ...	McLaren, 1931
Asteroid ...	Dr. Stocker × Thomsonii...	Rothschild
Atalanta ...	Werei × Thomsonii ...	Magor, 1926
Augfast ...	Augustinii × fastigiatum ...	Magor
Aurora ...	Kewense × Thomsonii ...	Rothschild
Avalanche ...	Loderi × calophytum ...	Rothschild
Avocet ...	discolor × Fortunei ...	Rothschild
Ayah ...	discolor × eriogynum ...	Rothschild
Ayesha ...	discolor × arboreum ...	Rothschild
Azaleoides ...	ponticum × nudiflorum ? ...	
Azma ...	Griersonianum × Fortunei ...	Stevenson, 1933
Azor ...	Griersonianum × discolor...	Stevenson, 1933
Azrie ...	Griersonianum × diaprepes ...	Stevenson, 1933
Aztec ...	arboreum × irroratum ...	Rothschild
Banshee ...	auriculatum × John Tremayne ...	Rothschild, 1934
Barbet ...	dichroanthum × callimorphum ...	Rothschild, 1935
Barbsutch ...	barbatum × sutchuenense ...	Magor
Barclayi...	Thomsonii × Glory of Penjerrick...	Barclay Fox
Battle Axe ...	Gill's Goliath × discolor ...	Rothschild, 1935
Bauble ...	Dawn's Delight × campylocarpum	Rothschild, 1934
B.B.C. ...	Don X × euchaites ...	Rothschild, 1935
Beau Brummell	Essex Scarlet × eriogynum ...	Rothschild, 1934
Beauty of Tremough	Griffithianum × arboreum ...	Shilson, 1902
Belisha Beacon...	Essex Scarlet × arboreum ...	Rothschild, 1935
Bellerophon ...	N. Shaw × eriogynum ...	Rothschild, 1934
Bengal Fire ...	obtusum var. Kaempferi × Oldhamii	Rothschild, 1934
Berryrose ...	Doncaster × dichroanthum ...	Rothschild, 1934
Beryl ...	spinuliferum × Valentinianum ...	Rothschild, 1935
Bibiani ...	Moser's Maroon × arboreum ...	Rothschild, 1934
Biskra ...	cinnabarinum × ambiguum ...	Rothschild, 1934

Name.	Parentage.	Raiser or Exhibitor.
Blanc-mange ...	Godesburg x auriculatum ...	Rothschild, 1934
Blue Tit ...	impeditum x Augustinii ...	J. C. Williams, 1933
Blushing Bride...	Dawn's Delight x discolor ...	Rothschild, 1934
Boadicea ...	Thomsonii x Hookeri ...	Rothschild, 1934
Bobolink ...	discolor x neriiflorum ...	Rothschild, 1934
Bodartianum ...	campanulatum x arboreum ...	? 1863
Bodnant Sunrise	Griffithianum x Griersonianum ...	McLaren, 1933
Bo-peep ...	lutescens x moupinense ...	Rothschild, 1934
Bonbon...	Souliei x maximum ...	Rothschild, 1934
Bonfire ...	(discolor x Mrs. R. T. Shaw) x Griersonianum	Waterer & Crisp, 1933
Bonito ...	discolor x Luscombei ...	Rothschild, 1934
Bow Bells ...	Corona x Williamsianum ...	Rothschild, 1934
Brachbooth ...	brachyanthum x Boothii ...	Magor, 1926
Brachdis ...	brachycarpum x discolor ...	Magor, 1925
Brachlep ...	brachyanthum x lepidotum ...	Magor
Brachydum ...	brachyanthum x flavidum ...	Waterer, 1921
Bracksoul ...	brachycarpum x Souliei ...	Magor
Break of Day ...	Dawn's Delight x dichroanthum...	Rothschild, 1934
Brenda ...	J. H. Agnew x Griersonianum ...	Rothschild, 1934
Bric-à-Brac ...	leucaspis x moupinense ...	Rothschild, 1934
Brigadier ...	Dawn's Delight x arboreum ...	Rothschild, 1934
Bright Eyes ...	Griffithianum x diphrocalyx ...	Rothschild, 1934
Brocade...	Vervaneana x Williamsianum ...	Rothschild, 1934
Bulbul ...	bullatum x moupinense ...	Rothschild, 1934
Burning Bush ...	haematodes x dichroanthum ...	Rothschild, 1934
Bustard...	auriculatum x Penjerrick ...	Rothschild, 1934
Butkew ...	Fortunei x Kewense ...	Magor
Calfort ...	calophytum x Fortunei ...	Ingram, 1932
Callirhoe ...	Dr. Stocker x arboreum ...	Magor, 1928
Calomina ...	Queen Wilhelmina x calophytum	Lady Loder, 1934
Calotum ...	calophytum x irroratum ...	Ingram, 1934
Camilla ...	Penjerrick x Loderi ...	McLaren, 1933
Campirr ...	campylocarpum x irroratum ...	Magor, 1926
Campkew ...	campylocarpum x Kewense ...	Magor, 1925
Carex ...	irroratum ? x Fargesii ? ...	Rothschild, 1932
Cartonii ...	nudiflorum x catawbiense ...	Carton, 1825
Caubut ...	caucasicum x Fortunei ...	Magor, 1926

Name.	Parentage.	Raiser or Exhibitor.
Cauking ...	caucasicum × Mrs. Randall Davidson	Magor, 1928
Cheronia ...	Rose Perfection × orbiculare ...	McLaren, 1933
Choremia ...	haematodes × arboreum ...	McLaren, 1933
Cilbooth ...	ciliatum × Boothii ...	Magor, 1926
Cilkeisk... ...	ciliatum × Keiskii ...	Magor
Cilpinense ...	ciliatum × moupinense ...	Aberconway, 1927
Cinncrass ...	cinnabarinum × crassum ...	Magor
Cinnkeys ...	cinnabarinum × Keysii ...	Magor, 1926
Cirrus ...	Smirnowii × arboreum ...	Reuthe, 1926
Cleopatra ...	Red Admiral × sutchuenense ...	Magor, 1931
Clio ...	xenosporum × Gilian ...	Magor, 1931
Cock of the Rock	cinnabarinum × Rose Mangles ...	Clarke, 1932
Codorus ...	racemosum × minus ...	Gable, 1934
Colonel Rogers	Falconeri × niveum ...	Rogers, 1926
Conemaugh ...	racemosum × mucronulatum ...	Gable, 1934
Conestoga ...	carolinianum × racemosum ...	Gable, 1934
Conewago ...	carolinianum × mucronulatum ...	Gable, 1934
Conewingo ...	haematodes × diphrocalyx ...	Gable, 1934
Conococheague	catawbiense × haematodes ...	Gable, 1934
Coresia ...	Penjerrick × Cornish Cross ...	McLaren, 1933
Coreta ...	Loderi × Kingianum ...	McLaren, 1933
Cornish Cross ...	Thomsonii × Griffithianum ...	S. Smith
Cornsutch ...	Cornubia × sutchuenense ...	Magor, 1926
Cornubia ...	arboreum × Shilsonii ...	Barclay Fox, 1914
Coronis ...	Corona × Loderi ...	McLaren, 1933
Countess of Derby	Pink Pearl × Cynthia ...	White, 1930
Countess of Haddington	ciliatum × Dalhousiae ...	? 1926
Countess of Sefton	Edgeworthii × multiflorum ...	
Crossbill ...	spinuliferum × lutescens ...	J. C. Williams, 1933
Cunningham's White	maximum × cinnamomeum ...	Cunningham, 1850
Cupid ...	Griffithianum × Luscombei ...	Johnstone, 1926
Damaris ...	Dr. Stocker × campylocarpum ...	Magor, 1926
Damask ...	Loderi × eriogynum ...	Clarke, 1932
Dame Nellie Melba	Standishii × arboreum ...	Sir E. Loder, 1926

Name.	Parentage.	Raiser or Exhibitor.
Daphne... ..	Red Admiral x neriiflorum ...	Magor, 1928
Delight	ciliatum x praecox... ..	Gill, 1926
Dido	dichroanthum x decorum... ..	Wilding, 1934
Dona Tizia	Doncaster x Griffithianum ...	Lowinsky
Dorothea	Griffithianum x decorum ...	Lowinsky, 1925
Dr. Stocker	caucasicum x Griffithianum ...	North
Duchess of Portland	barbatum x Handsworth White	Early Fisher & Sibray, 1903
Duke of Cornwall	arboreum x barbatum	Gill, 1926
Duke of York	Fortunei x Scipio	Paul, 1894
Earl of Morley... ..	campylocarpum x arboreum ...	
Early Gem	praecox x dauricum	1874
Edith A. Boulton	Fortunei x Meteor	Kew Gardens, 1894
Edusa	Penjerrick x campylocarpum ...	McLaren, 1933
Elisabetae	caucasicum x Smirnowii	
Elisabethae	Falconeri x argenteum	Reuthe, 1926
Elsae	grande x Hodgsonii	Reuthe, 1925
Ernest Gill	Fortunei x arboreum	Gill, 1926
Exminster	Thomsonii x campylocarpum ...	Barclay Fox, 1923
Exoniense	ciliatum x Veitchianum	Veitch, 1881
F. C. Puddle	neriiflorum x Griersonianum ...	McLaren, 1932
Fabia	dichroanthum x Griersonianum ...	McLaren, 1933
Falvia	Wardii x campylocarpum... ..	McLaren, 1933
Fargarb... ..	Fargesii x arboreum	Magor
Fasthip	fastigiatum x hippophaeoides ...	Magor, 1926
Fireball	barbatum x Ascot Brilliant ...	Gill, 1925
Firetail	Britannia x eriogynum	Crosfield, 1934
Forsterianum	Veitchianum x Edgeworthii ...	Forster, 1917
Fulgarb... ..	fulgens x arboreum	Magor
Gem	Halopeanum x Thomsonii	Sir E. Loder, 1926
General Sir John Du Cane	Thomsonii x discolor	Rothschild, 1933
Gilian	? x Griffithianum	Magor, 1923
Gill's Gloriosa	Griffithianum x Pink Pearl ...	Gill, 1927
Gill's Triumph	arboreum x Griffithianum	Gill
Gladys	campylocarpum x Fortunei ...	Clarke, 1926
Glaucoboothii	glaucum x Boothii... ..	Magor
Glory of Penjerrick	arboreum x Griffithianum	Barclay Fox, 1928

Name.	Parentage.	Raiser or Exhibitor.
Goldsworth Yellow	caucasicum x campylocarpum ...	Sloccock, 1925
Gowenianum ...	catawbiense x nudiflorum ...	? 1917
Halopeanum ...	Griffithianum x maximum ...	Halope, 1896
Harrisii ...	Thomsonii x ? ...	Harris, 1880
Hebe ...	Neriihaem x Williamsianum ...	Magor, 1927
Henryanum ...	Dalhousiae x formosum ...	Henry, 1926
Hipsal ...	hippophaeoides x saluenense ...	Magor, 1926
Hiraethlyn ...	haematodes x Griffithianum ...	McLaren, 1933
Hodconeri ...	Hodgsonii x Falconeri ...	Reuthe, 1926
Humming Bird	haematodes x Williamsianum ...	J. C. Williams, 1933
hybridum ...	viscosum x maximum ...	Herbert, 1817
Ida ...	J. G. Millais x neriiflorum ...	Rothschild, 1934
Impeanum ...	impeditum x Hanceanum ...	Kew Gardens, 1934
intermedium ...	ferrugineum x hirsutum ...	Nat. Hyb., 1891
Ione ...	Countess of Haddington x bullatum	Magor, 1926
Iphigeneia ...	Choremia x Thomsonii ...	Magor
Irrfarg ...	irroratum x Fargesii ...	Magor
Isabella ...	Griffithianum x auriculatum ...	G. H. Loder, 1934
Jacksonii ...	caucasicum x Nobleanum ...	? 1926
Jo ...	Bodartianum x Smithii ...	Magor
John Tremayne	arboreum x Griffithianum ...	Tremayne
Keiskarb ...	Keiskii x arboreum ...	Magor
Kernick Gem ...	barbatum x Luscombei ...	Gill, 1930
Kesselringii ...	Smirnowii x ponticum ...	Nat. Hyb., 1910
Kewarb... ...	Kewense x arboreum ...	Magor
Kewdec... ...	Kewense x decorum ...	Magor
Kewense ...	Griffithianum x Fortunei ...	Kew Gardens, 1888
Kewense Hybrid	Kewense x Griffithianum...	Gill, 1927
Kewxen ...	Kewense x xenosporum ...	Magor, 1927
Kingking ...	Kingianum x Mrs. R. Davidson	Magor
Kittiwake ...	lutescens x Edgeworthii ...	J. C. Williams, 1933
Koenig Carola	Falconeri x ponticum ...	Ludiecke, 1926
Koenigdis ...	Koenig Carola x discolor ...	Magor, 1926
Lady Berry ...	Rosy Bell x Royal Flush ...	Rothschild, 1935
Ladybird ...	discolor x Corona	Rothschild, 1933

Name.	Parentage.	Raiser or Exhibitor.
Lady Bessborough	discolor × campylocarpum ...	Rothschild, 1933
Lady Chamberlain	cinnabarinum × Royal Flush (orange var.)	Rothschild
Lady Eleanor Cathcart	maximum × arboreum	Waterer, 1926
Lady Linlithgow	Thomsonii × sutchuenense ...	R.B.G., Edinburgh
Lady Montagu...	Griffithianum × ?	Rothschild, 1931
Lady Rosebery	cinnabarinum × Royal Flush (pink var.)	Rothschild, 1930
Latona	Souliei × dichroanthum	McLaren, 1933
Leda	apodectum × Griersonianum ...	McLaren, 1933
Lepidoboothii ...	lepidotum × Boothii	Magor, 1919
Lindbull	Lindleyi × bullatum	Magor, 1926
Linley	Loderi × ?	Messel, 1927
Little Bill ...	Williamsianum × Lady Stewart of Wortley	Wallace, 1934
Loderi	Griffithianum × Fortunei ...	Sir E. Loder, 1911
Loki	Cornubia × ?	Lady Loder
Luscombei ...	Fortunei × Thomsonii	Luscombe, 1880
Maddchart ...	Maddenii × chartophyllum ...	Magor
Magniflorum ...	Countess of Haddington × Edgeworthii	Parker, 1917
Mansellii ...	Falconeri × grande	Downie, 1875
May Day	haematodes × Griersonianum ...	A. M. Williams, 1932
May Queen ...	Fortunei × ?	Sir E. Loder, 1926
Maya	sutchuenense × Ririei	Magor, 1933
Melissa	Ascot Brilliant × arboreum ...	Magor
Monstrous ...	Mrs. E. C. Stirling × Smirnowii hybrid	Waterer & Crisp, 1925
Moonstone ...	campylocarpum × Williamsianum	J. C. Williams, 1933
Morteri	calendulaceum × nudiflorum ...	? 1829
Mrs. J. Comber	diaprepes × decorum	Messel, 1932
Mrs. Randall Davidson	Griffithianum × campylocarpum (Hooker)	1926
Mrs. W. C. Slocock	campylocarpum × ?	Slocock, 1929
multiflorum ...	ciliatum × virgatum	Waterer & Crisp
Muriel	Falconeri × ?	Lady Loder, 1925

Name.	Parentage.	Raiser or Exhibitor.
Muriel Messel	Loderi x Loder's White ...	Messel, 1929
myrtifolium ...	minus x hirsutum ...	? 1917
Nancy ...	Prometheus x neriiflorum ...	Rothschild, 1934
Naomi ...	Aurora x Fortunei... ..	Rothschild, 1933
Neda ...	dichroanthum x Cunningham's Sulphur	McLaren, 1933
Nereid ...	neriiflorum x dichroanthum ...	Wilding, 1934
Neriiapo ...	apodectum x neriiflorum ...	Magor
Neriiarb ...	neriiflorum x arboreum ...	Magor, 1928
Neriihaem ...	neriiflorum x haematodes... ..	Magor, 1927
Nobleanum ...	caucasicum x arboreum ...	Waterer, 1835
Norman Shaw	discolor x B. de Bruin ...	Rothschild, 1926
Oliver ...	Loderi x ? ...	Messel, 1927
Oreoaug ...	oreotrepes x Augustinii ...	Magor
Oreocinn ...	oreotrepes x cinnabarinum ...	Magor, 1926
ornatum ...	viscosum x ponticum ...	Gowen, 1832
Pallida ...	Williamsianum x Griffithianum ...	McLaren, 1933
pallidum ...	? virgatum x hirsutum ...	? 1913
Pengaer... ..	Griffithianum x Thomsonii ...	Llewelyn, 1926
Penjerrick ...	campylocarpum x Griffithianum... ..	S. Smith
Penllyn ...	orbiculare x Griffithianum ...	McLaren, 1933
Philip Waterer...	Mrs. E. C. Stirling x maximum hybrid	Waterer, 1924
Phillida ...	Forsterianum x Edgeworthii ...	Ramsden, 1934
Phryne ...	campylocarpum x Loderi ...	McLaren, 1933
Pilgrim ...	Fortunei x Gill's Triumph ...	Rothschild, 1926
Pink Bride ...	Halopeanum x Griffithianum ...	Lady Loder
Pink Delight ...	arboreum x ? ...	Gill, 1926
Pink Domino ...	discolor x hardy hybrid ...	Waterer & Crisp, 1925
Pink Shell ...	Griffithianum x H. M. Arderne ...	Lowinsky, 1923
Polar Bear ...	diaprepes x auriculatum ...	Stevenson, 1933
praecox ...	ciliatum x dauricum ...	Davies, 1860
Princess Alice ...	Edgeworthii x ciliatum ...	? 1862
Princess of Orange	campylocarpum x Prince Camille de Rohan	Veitch
Prostigiatum ...	prostratum x fastigiatum ...	Magor, 1924
Protsal ...	prostratum x saluenense ...	Magor, 1926
pulcherrimum ...	arboreum x caucasicum ...	Waterer, 1835
Purity ...	Edgeworthii x formosum ...	Turner, 1908
Pyramus ...	Doncaster x Loderi ...	McLaren, 1933

Name.	Parentage.	Raiser or Exhibitor.
Red Admiral ...	arboreum × Thomsonii ...	J. C. Williams
Red Argenteum	grande × arboreum ...	? 1926
Robin Hood ...	calophytum × sutchuenense ...	J. C. Williams, 1933
Robin Redbreast	Houlstonii × orbiculare ...	J. C. Williams, 1933
Romany Chai ...	Moser's Maroon × Griersonianum	Rothschild, 1933
Romany Chal ...	Moser's Maroon × eriogynum ...	Rothschild, 1933
Rosamond ...	Cornubia × Loderi ...	Lady Loder, 1934
Rose Mangles ...	cinnabarinum × Maddenii ...	Mangles
Rosemary Chipp	orbiculare × Loderi ...	Kew Gardens, 1928
Rosy Bell ...	ciliatum × glaucum
Rotundarb ...	orbiculare × arboreum ...	Magor
Rovellianum ...	dauricum × ferrugineum ...	Rovelli, 1926
Royal Flush ...	cinnabarinum × Maddenii ...	J. C. Williams
Rundle's Scarlet	arboreum × ponticum
Russellianum ...	catawbiense × arboreum ...	Russell, 1831
St. Keverne ...	Kingianum × Griffithianum ...	P. D. Williams, 1922
Sarita Loder ...	Griersonianum × Loderi ...	G. H. Loder, 1934
Seta ...	spinuliferum × moupinense ...	McLaren, 1933
Sheila Osborn ...	discolor × Strategist ...	Kew Gardens, 1932
Shilsonii ...	Thomsonii × barbatum ...	Shilson, 1900
Shot Silk ...	campylocarpum × dichroanthum...	Ramsden, 1933
Sidonia ...	Rose Perfection × Fortunei ...	McLaren, 1933
Sir Frederick Moore	discolor × St. Keverne ...	Rothschild, 1935
Sir John Ramsden	Corona × Thomsonii ...	Waterer & Crisp, 1926
Smirnauck ...	Smirnowii × Griffithianum ...	Magor
Snow Bunting ...	arboreum × sutchuenense ...	J. C. Williams
Snow Queen ...	Halopeanum × Loderi ...	Sir E. Loder, 1926
Soularb... ..	Souliei × arboreum ...	Magor, 1926
Soulbut... ..	Souliei × Fortunei ...	Magor, 1926
Soulkew ...	Souliei × Kewense ...	Magor, 1926
Soulking ...	Souliei × Kingianum ...	Magor, 1926
Souvenir de Dr. S. Endtz	Pink Pearl × John Walter...	Endtz, 1924

Name.	Parentage.	Raiser or Exhibitor.
Spinulosum ...	spinuliferum x racemosum ...	Kew Gardens, 1926
Standishii ...	maximum x altaclarensis ...	Standish, 1844
Stanwellianum...	caucasicum x catawbiense ...	Methven, 1926
Stanwellii ...	campanulatum x ponticum ...	
Sulphur Yellow	Souliei x campylocarpum...	J. C. Williams
Sunset ...	Queen Wilhelmina x Loderi ...	Lady Loder, 1931
Sussex Bonfire...	haematodes x Cornish Cross ...	Lady Loder, 1934
Tally Ho ...	Griersonianum x eriogynum ...	{ Crosfield } { Lady Loder } 1933
Tessa ...	praecox x moupinense ...	Stevenson, 1935
Thomaden ...	Thomsonii x adenogynum ...	Magor
Thomasine ...	Souliei x Thomsonii ...	Clarke, 1931
Thomking ...	Thomsonii x Mrs. R. Davidson ...	Magor
Thomwilliams ...	Thomsonii x Williamsianum ...	Magor, 1927
Tittenhurst ...	Wightii x barbatum ...	White, 1933
Tittenhurst Belle	Corona x Griffithianum ...	Lowinsky, 1925
Towardii ...	catawbiense x altaclarensis ...	
Tregedna ...	Thomsonii x ? ...	
Triaur ...	triflorum x aureum ...	Magor
Tyermanii ...	Nuttallii x formosum ...	Tyerman, 1925
Vanessa...	Soulbut x Griersonianum ...	McLaren, 1929
Victorianum ...	Dalhousiae x Nuttallii ...	Cuvelier, 1887
Werei ...	arboreum ? x barbatum ?	S. Smith
White Samite ...	Corry Koster x Loderi ...	Wallace, 1932
Xenarb ...	detonsum x arboreum ...	Magor, 1926
Yellow Dwarf ...	Goldsworth Yellow x dichroanthum	Sir J. Ramsden
Yellow Hammer	sulfureum x flavidum ...	J. C. Williams
Yunnacinn ...	yunnanense x cinnabarinum ...	Magor
Yvonne ...	Aurora x Griffithianum ...	Rothschild

TABLE II.

adenogynum		
x arboreum	=	Arbad
x Thomsonii	=	Thomaden
altaclarensis		
x catawbiense	=	Towardii
x maximum	=	Standishii
ambiguum		
x cinnabarinum	=	Biskra
x Keysii	=	Amkeys
apodectum		
x Griersonianum	=	Leda
x neriiflorum	=	Neriiapo
arborescens		
x adenogynum	=	Arbad
x Ascot Brilliant	=	Melissa
x barbatum ?	=	Werei
x barbatum	=	Duke of Cornwall
x calophytum	=	Androcles
x campanulatum	=	Bodartianum
x campylocarpum	=	Arbcamp
x campylocarpum	=	Earl of Morley
x catawbiense	=	Russellianum
x catawbiense-ponticum	=	Altaclarensis
x caucasicum	=	Nobleanum
x Dawn's Delight	=	Brigadier
x detonsum	=	Xenarb
x discolor	=	Ayesha
x Dr. Stocker	=	Callirhoe
x Essex Scarlet	=	Belisha Beacon
x Fargesii	=	Fargarb
x Fortunei	=	Ernest Gill
x fulgens	=	Fulgarb
x grande	=	Red Argenteum
x Griffithianum	=	John Tremayne
x Griffithianum	=	Gill's Triumph
x Griffithianum	=	Glory of Penjerrick
x Griffithianum	=	Beauty of Tremough
x haematodes	=	Choremia
x irroratum	=	Aztec

x Keiskii	= Keiskarb
x Kewense	= Kewarb
x maximum	= Lady Eleanor Cathcart
x Moser's Maroon	= Bibiani
x neriiflorum	= Neriiaarb
x orbiculare	= Rotundarb
x ponticum	= Rundle's Scarlet
x Shilsonianii	= Cornubia
x Souliei	= Soularb
x Smirnowii	= Cirrus
x Standishii	= Dame Nellie Melba
x sutchuenense	= Snow Bunting
x Thomsonii	= Red Admiral
x ?	= Pink Delight
argenteum	
x Falconeri	= Elisabethae
Ascot Brilliant	
x arboreum	= Melissa
x barbatum	= Fireball
Augustinii	
x concinnum	= Argiolus
x fastigiatum	= Augfast
x impeditum	= Blue Tit
x oreotrepes	= Oreoaug
aureum	
x triflorum	= Triaur
auriculatum	
x diaprepes	= Polar Bear
x discolor	= Argosy
x George Hardy	= Aida
x Godesburg	= Blanc-mange
x Griffithianum	= Isabella
x John Tremayne	= Banshee
x Penjerrick	= Bustard
Aurora	
x Fortunei	= Naomi
x Griffithianum	= Yvonne
x Thomsonii	= Adelaide
barbatum	
x arboreum	= Duke of Cornwall
x arboreum ?	= Werei
x Ascot Brilliant	= Fireball

x Handsworth Early White	=	Duchess of Portland
x Hookeri	=	Alix
x Luscombei	=	Kernick Gem
x sutchuenense	=	Barbsutch
x Thomsonii	=	Shilsonii
x Wightii	=	Tittenhurst
B. de Bruin		
x discolor	=	Norman Shaw
Bodartianum		
x Smithii	=	Jo
Boothii		
x brachyanthum	=	Brachbooth
x ciliatum	=	Cilbooth
x glaucum	=	Glaucoboothii
x lepidotum	=	Lepidoboothii
brachyanthum		
x Boothii	=	Brachbooth
x flavidum	=	Brachydum
x lepidotum	=	Brachlep
brachycarpum		
x discolor	=	Brachdis
x Souliei	=	Bracksoul
Britannia		
x eriogynum	=	Firetail
bullatum		
x Countess of Haddington	=	Ione
x Lindleyi	=	Lindbull
x moupinense	=	Bulbul
burmanicum		
x lutescens	=	Alcesta
x racemosum	=	Amba
calendulaceum		
x nudiflorum	=	Morteri
callimorphum		
x campylocarpum	=	Abalone
x dichroanthum	=	Barbet
calophytum		
x arboreum	=	Androcles
x Cornubia	=	Amalfi
x Fortunei	=	Calfort
x irroratum	=	Calotum
x Loderi	=	Avalanche

- | | |
|---------------------------|-------------------------|
| x Queen Wilhelmina | = Calomina |
| x sutchuenense | = Robin Hood |
| campanulatum | |
| x arboreum | = Bodartianum |
| x Loderi | = Annabella |
| x ponticum | = Stanwellii |
| campylocarpum | |
| x arboreum | = Arbcamp |
| x arboreum | = Earl of Morley |
| x callimorphum | = Abalone |
| x caucasicum | = Goldsworth Yellow |
| x Dawn's Delight | = Bauble |
| x dichroanthum | = Shot Silk |
| x Dr. Stocker | = Damaris |
| x discolor | = A. Gilbert |
| x Fortunei | = Gladys |
| x Griffithianum | = Mrs. Randall Davidson |
| x irroratum | = Campirr |
| x Kewense | = Campkew |
| x Loderi | = Phryne |
| x Penjerrick | = Edusa |
| x Prince Camille de Rohan | = Princess of Orange |
| x Souliei | = Sulphur Yellow |
| x Thomsonii | = Exminster |
| x Wardii | = Falvia |
| x Williamsianum | = Moonstone |
| x ? | = Mrs. W. C. Slocock |
| campylocarpum var. elatum | |
| x discolor | = Lady Bessborough |
| x Griffithianum | = Penjerrick |
| carolinianum | |
| x mucronulatum | = Conewago |
| x racemosum | = Conestoga |
| catawbiense | |
| x altaclarensis | = Towardii |
| x arboreum | = Russellianum |
| x caucasicum | = Stanwellianum |
| x haematodes | = Conococheague |
| x nudiflorum | = Cartonii |
| catawbiense-ponticum | |
| x arboreum | = Altaclarensis |

- caucasicum
 - x arboreum = Nobleanum
 - x campylocarpum = Goldsworth Yellow
 - x catawbiense = Stanwellianum
 - x Fortunei = Caubut
 - x Griffithianum = Dr. Stocker
 - x Mrs. Randall Davidson = Cauking
 - x Nobleanum = Jacksonii
 - x Smirnowii = Elisabetae
- chaetomallum
 - x Queen Wilhelmina = Ambrose
- chartophyllum
 - x Maddenii = Maddchart
- Choremia
 - x Thomsonii = Iphigeneia
- ciliatum
 - x Boothii = Cilbooth
 - x Dalhousiae = Countess of Haddington
 - x dauricum = praecox
 - x Edgeworthii = Princess Alice
 - x glaucum = Rosy Bell
 - x Keiskii = Cilkeisk
 - x moupinense = Cilpinense
 - x praecox = Delight
 - x Veitchianum = Exoniense
 - x virgatum = multiflorum
- cinnabarinum
 - x ambiguum = Biskra
 - x crassum = Cinncrass
 - x Keysii = Cinnkeys
 - x Maddenii = Rose Mangles
 - x Maddenii = Royal Flush
 - x oreotrepheis = Oreocinn
 - x Rose Mangles = Cock of the Rock
 - x Royal Flush (orange var.) = Lady Chamberlain
 - x Royal Flush (pink var.) = Lady Rosebery
 - x yunnanense = Yuncinn
- cinnamomeum
 - x maximum = Cunningham's White
- concinnum
 - x Augustinii = Argiolus

Cornish Cross	
x haematodes	= Sussex Bonfire
x Penjerrick	= Coresia
Cornubia	
x calophytum	= Amalfi
x diphrocalyx	= Advie
x Loderi	= Rosamond
x sutchuenense	= Cornsutch
x ?	= Loki
Corona	
x discolor	= Ladybird
x Griffithianum	= Tittenhurst Belle
x Loderi	= Coronis
x Thomsonii	= Sir John Ramsden
x Williamsianum	= Bow Bells
Corry Koster	
x Loderi	= White Samite
Countess of Haddington	
x bullatum	= Ione
x Edgeworthii	= Magniflorum
crassum	
x cinnabarinum	= Cinncrass
Cunningham's Sulphur	
x dichroanthum	= Neda
x Griffithianum	= Dr. Stocker
Cynthia	
x Pink Pearl	= Countess of Derby
Dalhousiae	
x ciliatum	= Countess of Haddington
x formosum	= Henryanum
x Nuttallii	= Victorianum
dauricum	
x ciliatum	= praecox
x ferrugineum	= Rovellianum
x ponticum	= Aprilis
x praecox	= Early Gem
Dawn's Delight	
x arboreum	= Brigadier
x campylocarpum	= Bauble
x discolor	= Blushing Bride
x dichroanthum	= Break of Day

decorum	
x diaprepes	= Mrs. J. Comber
x dichroanthum	= Dido
x Griffithianum	= Dorothea
x Kewense	= Kewdec
Delavayi	
x Thomsonii	= Abbot
detonsum	
x arboreum	= Xenarb
diaprepes	
x auriculatum	= Polar Bear
x decorum	= Mrs. J. Comber
x Griersonianum	= Azrie
dichroanthum	
x callimorphum	= Barbet
x campylocarpum	= Shot Silk
x Cunningham's Sulphur	= Neda
x Dawn's Delight	= Break of Day
x decorum	= Dido
x Doncaster	= Berryrose
x Goldsworth Yellow	= Yellow Dwarf
x Griersonianum	= Fabia
x haematodes	= Burning Bush
x neriiflorum	= Nereid
x Penjerrick	= Astarte
x repens	= Arma
x Souliei	= Latona
didymum	
x Griersonianum	= Arthur Osborn
diphrocalyx	
x Cornubia	= Advie
x Griffithianum	= Bright Eyes
x haematodes	= Conewingo
x Thomsonii	= Adder
discolor	
x arboreum	= Ayesha
x auriculatum	= Argosy
x B. de Bruin	= Norman Shaw
x brachycarpum	= Brachdis
x campylocarpum	= A. Gilbert
x campylocarpum var. elatum	= Lady Bessborough
x Corona	= Ladybird

- x Dawn's Delight
- x eriogynum
- x Fortunei
- x Gill's Goliath
- x Gill's Triumph
- x Griersonianum
- x Griffithianum
- x hardy hybrid
- x King George
- x Koenig Carola
- x Loderi
- x Luscombei
- x Memoir
- x neriiflorum
- x St. Keverne
- x Strategist
- x Thomsonii
- Doncaster
 - x dichroanthum
 - x Griffithianum
 - x Loderi
- Don X
 - x euchaites
- Dr. Stocker
 - x arboreum
 - x campylocarpum
 - x Thomsonii
- Edgeworthii
 - x ciliatum
 - x Countess of Haddington
 - x formosum
 - x Forsterianum
 - x lutescens
 - x multiflorum
 - x Veitchianum
- eriogynum
 - x Britannia
 - x discolor
 - x Essex Scarlet
 - x Griersonianum
 - x Loderi
 - x Moser's Maroon
 - x N. Shaw
- = Blushing Bride
- = Ayah
- = Avocet
- = Battle Axe
- = Antonio
- = Azor
- = Angelo
- = Pink Domino
- = Akbar
- = Koenigdis
- = Albatross
- = Bonito
- = Ariel
- = Bobolink
- = Sir Frederick Moore
- = Sheila Osborn
- = General Sir John Du Cane
- = Berryrose
- = Dona Tizia
- = Pyramus
- = B.B.C.
- = Callirhoe
- = Damaris
- = Asteroid
- = Princess Alice
- = Magniflorum
- = Purity
- = Phillida
- = Kittiwake
- = Countess of Sefton
- = Forsterianum
- = Firetail
- = Ayah
- = Beau Brummell
- = Tally Ho
- = Damask
- = Romany Chal
- = Bellerophon

Essex Scarlet	
x arboreum	= Belisha Beacon
x eriogynum	= Beau Brummell
euchaites	
x Don X	= B.B.C.
Falconeri	
x argenteum	= Elisabethae
x grande	= Mansellii
x Hodgsonii	= Hodconeri
x niveum	= Colonel Rogers
x ponticum	= Koenig Carola
x ?	= Muriel
Fargesii	
x arboreum	= Fargarb
x irroratum	= Irrfarg
fastigiatum	
x Augustinii	= Augfast
x hippophaeoides	= Fasthip
x prostratum	= Prostigiatum
ferrugineum	
x dauricum	= Rovellianum
x hirsutum	= intermedium
x minus	= arbutifolium
flavidum	
x brachyanthum	= Brachydum
x sulfureum	= Yellow Hammer
formosum	
x Dalhousiae	= Henryanum
x Edgeworthii	= Purity
x Nuttallii	= Tyermanii
Forsterianum	
x Edgeworthii	= Phillida
Fortunei	
x arboreum	= Ernest Gill
x Aurora	= Naomi
x calophytum	= Calfort
x campylocarpum	= Gladys
x caucasicum	= Caubut
x discolor	= Avocet
x Gill's Triumph	= Pilgrim
x Griersonianum	= Azma
x Griffithianum	= Kewense

× Kewense	=	Butkew
× Meteor	=	Edith A. Boulton
× Rose Perfection	=	Sidonia
× Scipio	=	Duke of York
× Souliei	=	Soulbut
× Thomsonii	=	Luscombei
× ?	=	May Queen
fulgens		
× arboreum	=	Fulgarb
George Hardy		
× auriculatum	=	Aida
Gilian		
× xenosporum	=	Clio
Gill's Goliath		
× discolor	=	Battle Axe
Gill's Triumph		
× discolor	=	Antonio
× Fortunei	=	Pilgrim
× Thomsonii	=	Apache
glaucum		
× Boothii	=	Glaucoboothii
× ciliatum	=	Rosy Bell
Glory of Penjerrick		
× Thomsonii	=	Barclayi
Godesburg		
× auriculatum	=	Blanc-mange
Goldsworth Yellow		
× dichroanthum	=	Yellow Dwarf
grande		
× arboreum	=	Red Argenteum
× Falconeri	=	Mansellii
× Hodgsonii	=	Elsae
Griersonianum		
× apodectum	=	Leda
× diaprepes	=	Azrie
× dichroanthum	=	Fabia
× didymum	=	Arthur Osborn
× discolor	=	Azor
× eriogynum	=	Tally Ho
× Fortunei	=	Azma
× Griffithianum	=	Bodnant Sunrise

x haematodes	=	May Day
x J. H. Agnew	=	Brenda
x Loderi	=	Sarita Loder
x Moser's Maroon	=	Romany Chai
x neriiflorum	=	F. C. Puddle
x Penjerrick	=	Amaura
x Soulbut	=	Vanessa
x Thayerianum	=	Amor
x (discolor x Mrs. R. T. Shaw)	=	Bonfire
Griffithianum		
x arboreum	=	John Tremayne
x arboreum	=	Beauty of Tremough
x arboreum	=	Gill's Triumph
x arboreum	=	Glory of Penjerrick
x auriculatum	=	Isabella
x Aurora	=	Yvonne
x campylocarpum	=	Mrs. Randall Davidson
x campylocarpum var. elatum	=	Penjerrick
x caucasicum	=	Dr. Stocker
x Corona	=	Tittenhurst Belle
x decorum	=	Dorothea
x diphrocalyx	=	Bright Eyes
x discolor	=	Angelo
x Doncaster	=	Dona Tizia
x Fortunei	=	Kewense
x Griersonianum	=	Bodnant Sunrise
x haematodes	=	Hiraethlyn
x Halopeanum	=	Pink Bride
x H. M. Arderne	=	Pink Shell
x Kewense	=	Kewense Hybrid
x Kingianum	=	St. Keverne
x Luscombei	=	Cupid
x maximum	=	Halopeanum
x orbiculare	=	Penllyn
x Pink Pearl	=	Gill's Gloriosa
x ponticum	=	Alice Mangles
x Smirnowii	=	Smirnauck
x Thomsonii	=	Pengaer
x Thomsonii	=	Cornish Cross
x Williamsianum	=	Pallida
x ?	=	Gilian
x ?	=	Lady Montagu

H. M. Arderne		
x Griffithianum	=	Pink Shell
haematodes		
x arboreum	=	Choremia
x catawbiense	=	Coconocheague
x Cornish Cross	=	Sussex Bonfire
x dichroanthum	=	Burning Bush
x diphrocalyx	=	Conewingo
x Griersonianum	=	May Day
x Griffithianum	=	Hiraethlyn
x neriiflorum	=	Neriihaem
x White Pearl	=	Amaryllis
x Williamsianum	=	Humming Bird
Halopeanum		
x Griffithianum	=	Pink Bride
x Loderi	=	Snow Queen
x Thomsonii	=	Gem
Hanceanum		
x impeditum	=	Impeanum
Handsworth Early White		
x barbatum	=	Duchess of Portland
hippophaeoides		
x fastigiatum	=	Fasthip
x saluenense	=	Hipsal
hirsutum		
x ferrugineum	=	intermedium
x minus	=	myrtifolium
x ? virgatum	=	pallidum
Hodgsonii		
x Falconeri	=	Hodconeri
x grande	=	Elsae
Hookeri		
x barbatum	=	Alix
x Thomsonii	=	Boadicea
Houlstonii		
x orbiculare	=	Robin Redbreast
impeditum		
x Augustinii	=	Blue Tit
x Hanceanum	=	Impeanum
irroratum		
x arboreum	=	Aztec
x calophytum	=	Calotum

x campylocarpum	=	Campirr
x Fargesii	=	Irrfarg
Ivery's Scarlet		
x Loderi	=	Alvinda
J. G. Millais		
x neriiflorum	=	Ida
J. H. Agnew		
x Griersonianum	=	Brenda
John Tremayne		
x auriculatum	=	Banshee
John Walter		
x Pink Pearl	=	Souvenir de Dr. S. Endtz
Keiskii		
x arboreum	=	Keiskarb
x ciliatum	=	Cilkeisk
Kewense		
x arboreum	=	Kewarb
x campylocarpum	=	Campkew
x decorum	=	Kewdec
x Fortunei	=	Butkew
x Griffithianum	=	Kewense Hybrid
x Souliei	=	Soulkew
x Thomsonii	=	Aurora
x xenosporum	=	Kewxen
Keysii		
x cinnabarinum	=	Cinkeys
x ambiguum	=	Amkeys
King George		
x discolor	=	Akbar
Kingianum		
x Griffithianum	=	St. Keverne
x Loderi	=	Coreta
x Mrs. R. Davidson	=	Kingking
x Souliei	=	Soulking
Koenig Carola		
x discolor	=	Koenigdis
Lady Stewart of Wortley		
x Williamsianum	=	Little Bill
lepidotum		
x brachyanthum	=	Brachlep
x Boothii	=	Lepidoboothii

leucaspis		
x moupinense	=	Bric-à-Brac
Lindleyi		
x bullatum	=	Lindbull
Loderi		
x calophytum	=	Avalanche
x campanulatum	=	Annabella
x campylocarpum	=	Phryne
x Cornubia	=	Rosamond
x Corona	=	Coronis
x Corry Koster	=	White Samite
x discolor	=	Albatross
x Doncaster	=	Pyramus
x eriogynum	=	Damask
x Griersonianum	=	Sarita Loder
x Halopeanum	=	Snow Queen
x Ivery's Scarlet	=	Alvinda
x Kingianum	=	Coreta
x Loder's White	=	Muriel Messel
x orbiculare	=	Rosemary Chipp-
x Penjerrick	=	Camilla
x Queen Wilhelmina	=	Sunset
x ?	=	Linley
x ?	=	Oliver
Loder's White		
x Loderi	=	Muriel Messel
x Thomsonii	=	Agnes Lamont
Luscombei		
x barbatum	=	Kernick Gem
x discolor	=	Bonito
x Griffithianum	=	Cupid
lutescens		
x burmanicum	=	Alcesta
x Edgeworthii	=	Kittiwake
x moupinense	=	Bo-peep
x spinuliferum	=	Crossbill
Maddenii		
x chartophyllum	=	Maddchart
x cinnabarinum	=	Royal Flush
x cinnabarinum	=	Rose Mangles:

- maximum
 x altaclarensis
 x arboreum
 x cinnamomeum
 x Griffithianum
 x Souliei
 x viscosum
 Memoir
 x discolor
 Meteor
 x Fortunei
 minus
 x ferrugineum
 x hirsutum
 x racemosum
 Moser's Maroon
 x arboreum
 x eriogynum
 x Griersonianum
 moupinense
 x bullatum
 x ciliatum
 x lutescens
 x leucaspis
 x praecox
 x spinuliferum
 Mrs. E. C. Stirling
 x maximum hybrid
 x Smirnowii hybrid
 Mrs. Randall Davidson
 x caucasicum
 x Kingianum
 x Thomsonii
 mucronulatum
 x carolinianum
 x racemosum
 multiflorum
 x Edgeworthii
 N. Shaw
 x eriogynum
- = Standishii
 = Lady Eleanor Cathcart
 = Cunningham's White
 = Halopeanum
 = Bonbon
 = hybridum
 = Ariel
 = Edith A. Boulton
 = arbutifolium
 = myrtifolium
 = Codorus
 = Bibiani
 = Romany Chal
 = Romany Chai
 = Bulbul
 = Cilpinense
 = Bo-peep
 = Bric-à-Brac
 = Tessa
 = Seta
 = Philip Waterer
 = Monstrous
 = Caulking
 = Kingking
 = Thomking
 = Conewago
 = Conemaugh
 = Countess of Sefton
 = Bellerophon

neriiflorum	
x apodectum	= Neriapo
x arboreum	= Neriarb
x dichroantum	= Nereid
x discolor	= Bobolink
x Griersonianum	= F. C. Puddle
x haematodes	= Nerihaem
x J. G. Millais	= Ida
x Prometheus	= Nancy
x Red Admiral	= Daphne
x Sir Charles Lemon	= Alpaca
x sperabile	= Adjutant
x Thomsonii	= Aries
Nerihaem	
x Williamsianum	= Hebe
niveum	
x Falconeri	= Colonel Rogers
Nobleanum	
x caucasicum	= Jacksonii
nudiflorum	
x calendulaceum	= Morteri
x catawbiense	= Cartonii
Nuttallii	
x Dalhousiae	= Victorianum
x formosum	= Tyermanii
obtusum var. Kaempferi	
x Oldhamii	= Bengal Fire
Oldhamii	
x obtusum var. Kaempferi	= Bengal Fire
orbiculare	
x arboreum	= Rotundarb
x Griffithianum	= Penllyn
x Houlstonii	= Robin Redbreast
x Loderi	= Rosemary Chipp
x Rose Perfection	= Cheronia
oreotrepes	
x Augustinii	= Oreoaug
x cinnabarinum	= Oreocinn
Penjerrick	
x auriculatum	= Bustard
x campylocarpum	= Edusa
x Cornish Cross	= Coresia

x dichroanthum	= Astarte
x Griersonianum	= Amaura
x Loderi	= Camilla
x Wightii	= Aruna
Pink Pearl	
x Cynthia	= Countess of Derby
x Griffithianum	= Gill's Gloriosa
x John Walter	= Souvenir de Dr. S. Endtz
ponticum	
x arboreum	= Rundle's Scarlet
x campanulatum	= Stanwellii
x dauricum	= Aprilis
x Falconeri	= Koenig Carola
x Griffithianum	= Alice Mangles
x nudiflorum ?	= Azaleoides
x Smirnowii	= Kesselringii
x viscosum	= ornatum
praecox	
x ciliatum	= Delight
x dauricum	= Early Gem
x moupinense	= Tessa
Prince Camille de Rohan	
x campylocarpum	= Princess of Orange
Prometheus	
x neriiflorum	= Nancy
prostratum	
x fastigiatum	= Prostigiatum
x saluenense	= Protsal
Queen Wilhelmina	
x calophytum	= Calomina
x chaetomallum	= Ambrose
x Loderi	= Sunset
racemosum	
x burmanicum	= Amba
x carolinianum	= Conestoga
x minus	= Codorus
x mucronulatum	= Conemaugh
x spinuliferum	= Spinulosum
Red Admiral	
x neriiflorum	= Daphne
x sutchuenense	= Cleopatra
repens	
x dichroanthum	= Arma

Ririci		
x sutchuenense	=	Maya
Rose Mangles		
x cinnabarinum	=	Cock of the Rock
Rose Perfection		
x Fortunei	=	Sidonia
x orbiculare	=	Cheronia
Rosy Bell		
x Royal Flush	=	Lady Berry
Royal Flush		
x cinnabarinum (orange var.)	=	Lady Chamberlain
x cinnabarinum (pink var.)	=	Lady Rosebery
x Rosy Bell	=	Lady Berry
St. Keverne		
x discolor	=	Sir Frederick Moore
saluenense		
x hippophaeoides	=	Hipsal
x prostratum	=	Protsal
Scipio		
x Fortunei	=	Duke of York
Shilsonii		
x arboreum	=	Cornubia
Sir Charles Lemon		
x neriiflorum	=	Alpaca
Smirnowii		
x arboreum	=	Cirrus
x caucasicum	=	Elisabetae
x Griffithianum	=	Smirnauck
x ponticum	=	Kesselringii
Smithii		
x Bodartianum	=	Jo
Soulbut		
x Griersonianum	=	Vanessa
Souliei		
x arboreum	=	Soularb
x brachycarpum	=	Bracksoul
x campylocarpum	=	Sulphur Yellow
x dichroanthum	=	Latona
x Fortunei	=	Soulbut
x Kewense	=	Soulkew
x Kingianum	=	Soulking
x maximum	=	Bonbon

x neriiflorum	= Adjutant
x Thomsonii	= Thomasine
sperabile	
x neriiflorum	= Adjutant
x Williamsianum	= Arab
spinuliferum	
x lutescens	= Crossbill
x moupinense	= Seta
x racemosum	= Spinulosum
x Valentinianum	= Beryl
Standishii	
x arboreum	= Dame Nellie Melba
Strategist	
x discolor	= Sheila Osborn
sulfureum	
x flavidum	= Yellow Hammer
sutchuenense	
x arboreum	= Snow Bunting
x barbatum	= Barbsutch
x calophytum	= Robin Hood
x Cornubia	= Cornsutch
x Red Admiral	= Cleopatra
x Ririei	= Maya
x Thomsonii	= Lady Linlithgow
Thayerianum	
x Griersonianum	= Amor
Thomsonii	
x adenogynum	= Thomaden
x arboreum	= Red Admiral
x Aurora	= Adelaide
x barbatum	= Shilsonianii
x campylocarpum	= Exminster
x Choremia	= Iphigeneia
x Corona	= Sir John Ramsden
x Delavayi	= Abbot
x diphrocalyx	= Adder
x discolor	= General Sir John Du Cane
x Dr. Stocker	= Asteroid
x Fortunei	= Luscombei
x Gill's Triumph	= Apache
x Glory of Penjerrick	= Barclayi
x Griffithianum	= Pengaer

x Griffithianum	=	Cornish Cross
x Halopeanum	=	Gem
x Hookeri	=	Boadicea
x Kewense	=	Aurora
x Loder's White	=	Agnes Lamont
x Mrs. Randall Davidson	=	Thomking
x neriiflorum	=	Aries
x Souliei	=	Thomasine
x sutchuenense	=	Lady Linlithgow
x Werei	=	Atalanta
x Williamsianum	=	Thomwilliams
x ?	=	Anne
x ?	=	Harrisii
x ?	=	Tregedna
triflorum		
x aureum	=	Triaur
Valentinianum		
x spinuliferum	=	Beryl
Veitchianum		
x ciliatum	=	Exoniense
x Edgeworthii	=	Forsterianum
Vervaneana		
x Williamsianum	=	Brocade
virgatum		
x ciliatum	=	multiflorum
x hirsutum ?	=	pallidum
viscosum		
x maximum	=	hybridum
x ponticum	=	ornatum
Wardii		
x campylocarpum	=	Falvia
Werei		
x Thomsonii	=	Atalanta
White Pearl		
x haematodes	=	Amaryllis
Wightii		
x barbatum	=	Tittenhurst
x Penjerrick	=	Aruna
Williamsianum		
x campylocarpum	=	Moonstone
x Corona	=	Bow Bells

x Griffithianum	= Pallida
x haematodes	= Humming Bird
x Lady Stewart of Wortley	= Little Bill
x Neriihaem	= Hebe
x sperabile	= Arab
x Thomsonii	= Thomwilliams
x Vervaneana	= Brocade
xenosporum	
x Gilian	= Clio
x Kewense	= Kewxen
yunnanense	
x cinnabarinum	= Yunncinn

NOTES ON THE SERIES OF RHODODENDRONS.

SERIES CINNABARINUM.

R. cinnabarinum itself forms a shrub from 6-8 feet in height with orange flowers tinged with red, resembling a *Lapageria* but smaller. *Var. blandfordiaeflorum*, with pale yellow or yellowish-green, rather smaller flowers tinged with red is an attractive variety which has been known for many years, while *var. Roylei*, with a rather shorter corolla, more open, is of a brighter, intense, almost cinnabar red right through. All these three forms have been grown in our gardens for many years and are easily procurable, and the effect of a plant in full bloom with the setting sun behind it is an outstanding feature of many a garden at the end of May, when it is in its full glory. But last year I flowered an attractive pale yellow form sent home by Kingdon Ward under No. 5874, and we still have two or three of his seed numbers to flower in our gardens with interesting colour variations according to that indefatigable collector. It is a plant which should be in every garden where rhododendrons grow. The only other member of the series—*R. Keysii*—is undoubtedly not so hardy. When seen at its best in the Cornish gardens with its bright brick-red flowers and yellowing edging, it is a most attractive plant. A form sent back by Kingdon Ward has flowered with a solid colour throughout and has been given the varietal name of *unicolor*. At Exbury it is slightly hardier than the type, and so is another sending of Kingdon Ward which has not yet flowered. As it comes from 9-16,000 feet elevation in the Himalayas some forms of this rhododendron should be hardy, and it is a pity that most of the specimens growing in our

gardens to-day come from the lower elevation. Where "The Species of Rhododendron" obtained their colour notes I do not know, as they give the flowers as "pink with cream colour corolla lobes"; this variety I have never seen.

SERIES DAURICUM.

A small group, indefinite, midway between the typical rhododendron and azalea, which contains but two species: *R. dauricum*, with its pinky-mauve flowers, is pretty in the early spring; its variety *atrovirens* has very dark green foliage, almost persistent, and deeper coloured flowers with a distinct purple tinge. I think this is the more usual form growing in our gardens. It is a very widespread Eastern species, but is not as valuable a garden plant as the other member of the series, *R. mucronulatum*, which should be in every garden. At Exbury it covers itself with its bright mauve flowers, weather permitting, on the 1st January, and while of course a frost will damage any that are out, it hardly ever misses a good display: even at Kew it is a valuable winter flowering plant, growing eventually 8-10 feet high and as much through. It should be given a sheltered position, though for cold gardens its variety *acuminatum*, which flowers several weeks later, is perhaps a better plant. I have seen the young shoots cut by late spring frost but, coming as it does from North-eastern Asia, it will stand any winter frost and quickly recovers from any slight set-back in the spring.

SERIES EDGEWORTHII.

With the Edgeworthii Series we swing immediately right over to the other side of the pendulum. Unfortunately, although it contains some of the most beautiful members of the genus, nearly all with large white, pink or pale yellow flowers, intensely fragrant, all the members of the series are

on the tender side and should only be tried outdoors in the most favoured gardens. Some forms of *R. bullatum* have been sent back recently from a higher elevation which will stand more frost, but even these are only suitable for very sheltered gardens. Rock No. 59202, with its pink flowers, is most attractive in the rock garden at Exbury and has flowered freely for the last three years. Forrest No. 21564 is also one of the hardier forms, but while they seem to withstand a sharp winter frost, they do not like the quick changes from frost to thaw and back again to frost which occurred so frequently last winter and which did considerable damage to this latter number at Exbury. Of course, when it comes to Cornwall, Devonshire, and South Wales, it is a magnificent rhododendron and it should be equally good in the warmer western gardens of Scotland; but for those who live in colder climes it is a greenhouse rhododendron and is well worthy of growing in this way as it is unsurpassed for beauty and purity of flower. This Chinese rhododendron forms a loosely branched shrub up to 8 feet high and seems altogether a better grower than the practically identical shrub which is found in the Himalayas, *R. Edgeworthii*, which is too tender for any except the most favoured gardens and, in my opinion, not as good a greenhouse plant. Of the other members of this Series, *R. seinghkuense* deserves mention, if merely for its bright sulphur-yellow flowers with red-brown anthers. It has been twice sent home by Kingdon Ward, but I have had no experience of growing it in the open.

SERIES FALCONERI.

The Falconeri Series, which comes next on our list, is very distinct and it can only be confused with the Grande Series, from which it differs particularly in the indumentum on the under surface of the leaf. As a rule in the Falconeri Series this is much more woolly and is in two layers, the

upper of which consists of distinct cup or funnel-shaped hairs, which are found in no other series. The members of this series are nearly always tree-like and eventually cover a considerable spread of ground and therefore are only suitable for planting as single specimens or groups, where every tree can retain its full size, always in the woodland in semi-shade with plenty of moisture available in the growing season, as otherwise the large leaves are apt to become deformed and crinkled. It is not only necessary for these rhododendrons to have moisture at the roots but moisture in the air during the growing period is essential for perfect foliage. *R. arizelum*, which is very closely related to the Himalayan *Falconeri*, seems to be a rather smaller growing plant than the latter and comes from that district where China, Burma and Tibet meet. It has large trusses of pale yellow flowers with crimson blotches, not perhaps as large as *R. Falconeri*, but it is none the less an attractive plant, especially as it flowers at a younger stage than that rhododendron. Farrer found that it hybridized easily with *R. basilicum* and collected intermediate forms, which have so far not yet flowered at Exbury, though they are growing there. Forrest has sent home several sendings, some with yellow flowers, some pink and some magenta, while forms with white flowers are also known: these latter have not flowered yet and may possibly be hybrids similar to those Farrer sent home. It grows 10-20 feet in height and in the open woodland is an attractive foliage shrub, while it seems perfectly at home in southern gardens.

R. basilicum, which grows from 10-30 feet in height, has rather more shiny leaves and is a member of this series which loses its first spongy indumentum that comes with the young leaf and leaves the under surface grey, smooth, skin-like. The only plants that I have seen in flower had pale yellow blooms, stained crimson all over with a crimson blotch. It is a far better colour than *R. Hodgsonii*, which is

its near relative, but while interesting and a fine foliage plant, is not one of the most beautiful in flower, while it is distinctly more tender than *R. arizelum*. *R. coriaceum*, a shrub of 10-25 feet in height, with long grey-green leaves, so far as I have seen it, is a long way the worst rhododendron in the series, and with its small white flowers is not worth growing except for the rhododendron enthusiast who forms a collection of every rhododendron species he can grow. It seems quite hardy. *R. eximium*, a tree up to 30 feet high, is one of the most attractive foliage plants of the whole species of rhododendron; a really healthy plant growing in suitable surroundings has its new leaves covered on the top with a dense, almost rusty-golden indumentum and makes a striking object in the woodland in that state. The flowers, which are of a rose or dull pink tinge, are certainly not as attractive as those of *R. Falconeri*, but to be successful with this rhododendron semi-shade, plenty of moisture during the growing season not only at the roots but especially in the air all round, are essential. It luxuriates on the western seaboard of Scotland. At Exbury the conditions are too dry during the growing period, and though I like it, it is often crippled in the foliage. The next one—*R. Falconeri*—is probably the largest in the series, reaching 40 or 50 feet in height in its native habitat and as much through. Its fine large, dark green leaves, with brown felt beneath, and its trusses of pale yellow flowers, make this one of the noblest rhododendrons that can be cultivated in the woodland; but semi-shade and moisture are again essential and it requires a sheltered position to be seen to advantage as it is not quite hardy in cool gardens. *R. fictolacteum*, however, is more suited to general cultivation and seems to be hardy, growing well in any ordinary rhododendron soil and situation. It flowers at the end of April, so a sheltered garden will show it to better advantage. It forms a tree, 15-45 feet high, and I have seen a photograph taken by

Forrest of a row of these rhododendrons in the wild in full bloom, almost like a ponticum drift in our woods; seen thus it must be a magnificent sight, and its white flowers, sometimes spotted, in a good truss, must be very attractive when it is large enough to show itself to full advantage. Forrest has sent back forms with rose-coloured flowers, but these I have not yet seen in flower. It certainly should be in every collection of rhododendrons, and as it is very widely distributed in Yunnan there are many forms, some with larger leaves, some with smaller, and I rather fancy some with much better trusses than others, though it is difficult to say which is the best form at the present time. Kingdon Ward has sent back the largest-leaved form but it has not yet flowered at Exbury; its dark green leaves are smoother than the majority of the members of the series and the indumentum is less, though with the dark green colour they usually exhibit it is a good foliage plant.

R. galactinum, which Wilson introduced from Szechuen, is perhaps least typical of the series. It is said to form a tree of from 15-22 feet high, but it grows very slowly and flowers when only some 3 or 4 feet high. Its dull green leaves are the least attractive of the series and its dull white flowers, often spotted, while as large as the average garden hybrid, bear no comparison with other members of the series. Its great merit, however, is its extreme hardiness and I think it will grow in any district where any other rhododendron will grow in this country. It is not to be despised but is not a plant for those who only want the elite; it seems to grow in any situation, either sun or shade.

R. Hodgsonii has been successfully grown in this country for many years. It seems quite hardy and forms a small tree of 12-20 feet in height. Its flowers are of rather a disagreeable magenta pink and are not attractive, but when it is grown in kindly soil and semi-shade it forms one of the finest foliage plants in our gardens with its large, dark green

polished leaves, and as it is a fairly easy rhododendron as regards its likings, can usually be found in robust health.

Of the remaining members of the series we have as yet little knowledge and it is impossible to give any details in these notes, *R. rex*, from Rock's seed, being only a few inches high at present at Exbury, where it seems quite happy.

SERIES FERRUGINEUM.

The Ferrugineum Series is a very distinct section of the rhododendron family, which comes from the mountains of Southern Europe, from the Pyrenees to Transylvania.

R. ferrugineum, with reddish-pink flowers, is a small shrub, very pretty when seen in bloom covering the hills, and found occasionally with white flowers. It succeeds pretty well in ordinary rhododendron positions, but seems more suitable for the rock garden.

R. hirsutum, which is found on limestone, is also to be found with white flowers and seems to be a better plant for our climate, growing equally well in non-calcareous soil. It can be distinguished by the leaves being fringed with bristly hairs.

R. Kotschyi, the other member of the series, from Transylvania, is not in general cultivation.

Although not showy they are all three pretty little plants and of good garden value when well grown.

SERIES FORTUNEI.

The next series, that of Fortunei, is a large and important one. In "The Species of Rhododendron" it is divided into six sub-series, the first of which, that of Calophytum, contains two species, the only one in cultivation, however, being the rhododendron which gives its name to this section, and of all the rhododendrons that Wilson introduced, this is certainly the finest of the large ones.

"The Species of *Rhododendron*" say that in cultivation it is a shrub of 15 feet and in the wild state a tree up to 50 feet in height, but I think they rather mean that there are no rhododendrons larger than 15 feet in height at present growing in our gardens. Those at Exbury show no signs of diminishing their growth annually, nor do those I have seen at Caerhays, and although they may never grow quite as tall in our gardens as in China, it is a rhododendron which must be planted singly in the woodland with plenty of room to develop its magnificent foliage and flowers; its leaves are extremely handsome and its large trusses of pure white flowers with a deep maroon blotch are a magnificent sight in a sheltered garden at the end of March or early April. While it seems fairly hardy and can be successfully grown in the woodland inland, its early flowering habit detracts from its usefulness, though at Exbury it has only once been caught by the frost and I have flowered it now every year since 1919. There are forms with fine salmon-pink flowers, with a deep basal blotch and spotted. It certainly crosses, like all *Fortunei* rhododendrons, with *ponticum*, *arboreum*, *lacteum* and their hybrids, but the shape of its truss and the stigma bear a much greater resemblance to the *Grande Series* and it looks as if it should cross with that species. No collection of rhododendrons should omit this.

The next *Subseries* is that of *Davidii*. This rhododendron itself is not in cultivation in this country although numerous forms of *Subseries Oreodoxa* have been given this name and still bear this label in many gardens, including Exbury, where I am still finding the label on occasional plants and removing it.

R. planetum, a shrub of 4-12 feet in height, is rare in cultivation, although with its clear pink flowers it is quite attractive. *R. praeevernum*, however, a medium size compact shrub, is better known. Its large white flowers with a dark maroon blotch are very attractive in early March and it is

well worth a place in the woodland. Wilson would not agree that it was a distinct species and merged it with *R. sutchuenense*, but it can be distinguished by the glabrous mid-rib.

R. sutchuenense itself, a vigorous, strong-growing shrub up to 10 feet in height already in our gardens and much taller in the wild, is a fitting companion, although in a different subseries, to *R. calophytum*. Wilson sent it back several times and there are some four forms growing in our gardens: a pale almost lavender pink with large trusses, usually in bloom in February, though I have seen it at the end of January—it is a fine early flowering plant for sheltered gardens: what may be called the typical *sutchuenense* with pale rose-coloured trusses, not blotched, and flowering in March or April and which looks like becoming a really large shrub in our gardens: its variety *Geraldii*, which has rather deeper rose pink flowers and a very deep, large maroon blotch, perhaps the most striking of all the *sutchuenenses* in bloom, also flowering in early April: while another form with virulent magenta flowers has appeared in seedlings from the wild, and is really only fitted for the bonfire. All these forms require open woodland and are best treated as specimen plants with plenty of room to grow so they can show their handsome foliage, which consists of rather smaller, narrower and smoother leaves than *R. calophytum*. It makes a pyramidal bush and has leaves persisting right down to the ground, so it is not only one of the handsomest of the Chinese flowering shrubs but also a fine foliage plant. It is an easy doer and should be in every rhododendron garden.

The *Subseries Fortunei* is the largest group of this large family. *R. decorum*, one of the most common rhododendrons in Yunnan and Szechuen, has been introduced over and over again. "The Species of Rhododendron" call it a somewhat straggling shrub, 6-20 feet in height, but where it does well it makes a fine compact shrub or small tree, and in Cornwall and the western seaboard, with its large white

or pink fragrant flowers, it is an extremely fine and attractive rhododendron. Some forms are more tender than others and unfortunately the largest-flowered forms are the most tender, and at Exbury it is the earlier introductions of Wilson, with their smaller white flowers, that succeed the best; even these, however, are attractive when covered with bloom, as they were last year, but in my opinion it is not a plant for the dry inland garden.

Still less so is *R. diaprepes*, a shrub 10-25 feet in height, very near *R. decorum* but with larger leaves and larger flowers. Its flowers, however, are apt to get spotted with rain and in all but the very mildest districts it splits its bark, which renders it a rhododendron not fitted for general cultivation.

Against this, when we come to *R. discolor* we find one of the most useful rhododendrons that Wilson sent back, flowering as it does the first week in July; with its large trusses of either white or pink fragrant flowers, it makes a fine sight in early summer when most of the other rhododendrons are over. It has been much used by the hybridist with successful results. Again "The Species of Rhododendron" gives its height in cultivation as 4-6 feet and in the wild 20 feet, but it will easily attain that stature in England in milder districts at any rate, as seedlings raised at Exbury are already over 10 feet in height. It is best grown in semi-shade in the woodland, with plenty of room to develop and show its beauty of flower, and as long as it has sufficient water during the growing season in July, it is one of the easiest rhododendrons. I fear, however, it is apt to split its bark in some of the colder districts of Scotland, where it is too late growing to ripen its wood before the early frost appears.

R. Fortunei is perhaps best known in our gardens as one of the parents of *R. Loderi*, though the plant itself is most attractive with its pale lavender-pink flowers. It forms a robust shrub of 12 feet or more in height, extremely hardy,

sweetly scented and very floriferous, and should be much more widely grown.

R. glanduliferum and *R. Hemsleyanum* are not in cultivation so far as I know.

R. Houlstonii, a bush of 6-12 feet in height with small pink flowers, is quite pretty but not so attractive as other members of this subseries, while *R. serotinum* is only growing in a few gardens. This latter shrub is very near *R. decorum* and eventually reaches a height of 10 feet or more with rather straggling growth, differing mainly from *R. decorum* in its flowering period, which is the latest of all the species of rhododendron and occurs between August and October, varying with the season.

R. vernicosum is a very variable species, which includes four geographical forms, *araliaeforme*, *euanthum*, *rhantum* and *Sheltonae*. It is a spreading shrub of 6-25 feet in height, and has trusses of small flowers, white to bright rose, with or without crimson markings. It is a very widely distributed plant in China and has been sent home countless times by Forrest, Kingdon Ward and Rock—some forms are better than others. The plant owes its name to the foliage of the first specimen sent home having been dried rather too close to a fire, so that the wax on the leaves melted and they had a varnished appearance. It is quite easy to test this for oneself by lighting a match and holding it near a leaf, when the wax covering will melt and give the leaf the shiny appearance, from which the plant takes its name. Too few of the forms sent home have yet flowered to be able to say which is the best, but from those that I have seen so far there is no doubt that some of them will be very desirable and attractive in the woodland, where they require similar treatment to all other members of the series, though some of the smaller and semi-compact growing forms may be planted a little closer together.

Subseries Griffithianum. The next subseries contains but one rhododendron, and that is possibly the finest that

has ever been introduced and one which has had a greater effect upon our hybrids than any other rhododendron that has come to our shores, namely, *R. Griffithianum*, a rhododendron which is so far apart from any other members of the series that it really might have had a series to itself. Its very large, slightly scented white flowers, white tinged pink, deeper tinted rose or yellowish, are magnificent and it is a thousand pities that it is too tender except for Devonshire, Cornwall or the western seaboard. At Exbury it exists and gives me pleasure, but there it is only 8-10 feet in height, whereas in Cornwall it is some 20 feet or more, but even there its young growth is apt to catch a spring frost with no flowers the following year, and at Exbury its stem is scarred with the various splits that frost has caused.

Subseries Orbiculare. Another subseries which contains but one rhododendron is that of *Orbiculare*. In some ways *R. orbiculare* is one of the most distinct rhododendrons that Wilson has ever sent back and where it is well grown, as at Caerhays, it forms a most perfect pyramidal bush, almost like a Dutch clipped yew: in fact, it is sometimes almost impossible to believe that it is nature and not man that is responsible for its perfect shape. Its pale green orbicular leaves are quite attractive and its trusses of campanulate rose flowers are attractive in the sunshine, though in the shade they are apt to have a bluish tinge. Some forms, however, are better than others. It seems to be perfectly hardy and eventually should reach a height of about 9 feet: there is already one in this country over 6 feet high and 13 feet through.

Subseries Oreodoxa. The last of the subseries, that of *Oreodoxa*, is an attractive one. *R. erubescens* is not common in our gardens, but it is very near to *R. Fargesii*, which can be easily obtained. This is a very free flowering shrub of 3-18 feet in height with pale rose-pink flowers, very attractive in the sunshine when it is covered all over with its nodding

bells as I have seen it in Cornish gardens. At Exbury it is perfectly hardy and looks very happy in the woodland, but with its free flowering habit it is essential to pick off the flowers as soon as they are faded to preserve it in good health.

R. oreodoxa, a very near relation with rather smaller leaves, is a rather faster growing, taller shrub or small tree with pale pink flowers and rather loose trusses of nodding bells. It is widely spread in Szechuen and Kansu and has numerous forms, including *haematocheilum*, *Limprichtii* and *Reginaldii*, and is a fine rhododendron in the sheltered woodland. It is one of the first species to open its flowers, which it often does at the end of February or early March, and therefore only fitted for a sheltered garden and a sheltered situation, but the flowers in bud are more frost-resisting than any other rhododendron I know; the flowers open from the bud and show the individual bells tightly folded and bright red, and in this shape it will often stand several degrees of frost without being injured, taking advantage of the first few days of mild weather to show its beauty.

R. praeteritum, the last member of the series, is a close relation, but flowering even earlier at the end of February.

SERIES FULVUM.

The next series is a comparatively small one and is entirely confined to Western Yunnan and the surrounding alps. It consists of five species and of these but three are common in our gardens.

R. fulvoides, a shrub 8-20 feet high, seems a robust doer and a fine foliage plant, the under surface of the leaves being covered with a coarse indumentum. It is going to flower at Exbury for the first time this year.

R. fulvum, a small tree from 9-18 feet high, with fine dark green leaves and tawny orange indumentum underneath, is a good doer in cultivation and one of the best of the newer introductions as regards foliage: it never fails to attract attention in this respect in the garden. Its flowers, which are of a pale nondescript pink, are quite attractive but, coming as they do in mid-April, require a garden free from late spring frosts for them to show themselves to perfection. It is essentially a plant for the woodland and although it has not yet reached that point in our gardens when it reaches maturity, is so free flowering that Farrer, when he collected seed of it, wrote in his field notes that it resembled a garden hybrid in its floriferousness.

R. niphargum, from 15 to 20 feet high, has white flushed rose or pale rose flowers, with the opening leaves white floccose above and eventually underneath turning to thin white indumentum becoming ash-gray with age. It seems fairly hardy.

R. uvarifolium, which has been collected only once or twice, is very closely allied to *R. niphargum*, differing particularly in the narrower leaves, and while it is said to have white flowers with crimson spots and blotch, has not yet shown itself in our gardens.

SERIES GLAUCUM.

When we come to the Glaucum Series we come to one which contains some of the most attractive dwarf shrubs that will grow in our gardens, and also some which are hardly worth a place except for their foliage and healthy appearance. Amongst the latter is *R. brachyanthum*, the first of the series to be mentioned, with pale yellow or greenish-yellow flowers, very small, standing out from the little truss which covers the plant when it is in full bloom, though in spite of this it makes no show. The foliage of the plant emits an odour something

like gas tar and it is in no way a striking rhododendron, though it makes a good little shrub in the woodland in front of larger specimens.

R. charitopes, on the other hand, is one of the gems of the rhododendron family. A small bush, 1 foot in height, or rather more at Exbury—it looks like reaching 2 or 3 feet. It covers itself in the spring with clear apple-blossom pink flowers speckled with crimson and is a most attractive sight in the rock garden, though it is an easy doer and I should imagine would equally well serve as an edging down a woodland path. It flowers usually towards the middle or end of April but seems quite hardy and well worth a place in the garden.

R. charitostreptum is another member of this series but we know very little about it in our gardens.

R. Genestierianum is one of the most interesting of all rhododendrons. It forms a shrub up to 12 feet in height, though Kingdon Ward has sent back a form which in its native home grows 20 feet, with leaves large for the series, 4-6 inches long and only 1-1½ inches broad, quite white underneath. The flowers, which are very small, are plum purple covered with a glaucous bloom, and when seen with the sun shining through them, almost a maroon tinge; the flowers resemble more the *R. myrtilloides* section and it is curious to see so small flowers in such a big plant. The form which Forrest sent home is unfortunately very tender and only a few very miserable specimens survived at Exbury from several seed sowings. In Cornwall, however, it is an attractive foliage plant and quite interesting when in bloom and it should succeed well all along the western seaboard. Kingdon Ward's form is only a few inches high now but survived last winter in the open without showing any ill effects.

That old Himalayan plant, *R. glaucum*, should be in every garden if only for the pungent aromatic scent of the leaf,

though the dull pink flowers are most attractive in the spring when they cover the whole plant so that the foliage is not visible. It sets seed very freely and to keep the plant in health the flowers must be picked off every year, a laborious undertaking. The front edging of a woodland walk is eminently suitable for it and it seems quite hardy in ordinary rhododendron gardens.

R. hypolepidotum is another rhododendron with small yellow flowers, closely resembling *R. brachyanthum* though perhaps a little better colour, and the foliage is not quite so pungent. It is of little value in our gardens.

R. pruniflorum is a charming little member of this series, forming a compact undershrub 1-2 feet high, with small flowers of deep plum purple or nearly crimson or violet. It flowers rather later than most of the rhododendrons in this series and seems perfectly hardy. I like it very much along a woodland path, though the leaves when rubbed emit a strong and unpleasant odour, but there is no reason to rub the leaves beyond curiosity, and it is a plant I would warmly recommend to every rhododendron enthusiast.

R. shweliense, a shrub 2-2½ feet high with aromatic foliage and greenish-yellow flowers, is not so far as I know in cultivation.

R. sordidum, another little member of this family with aromatic foliage and small dark purple flowers, seems to resemble *R. pruniflorum* and is quite attractive in itself though smaller in every respect.

Lastly we come to *R. tsangpoense*, a small shrub of 1-2 feet high, forming a dense tangled scrub in sheltered or exposed situations in the wild, with pink or deep rose flowers. It seems easy to do and is quite an attractive little plant in the rhododendron garden, in fact, there are very few members of this series that I would willingly be without.

NOTES ON HYBRID RHODODENDRONS.

In last year's article on Hybrid Rhododendrons I mentioned the Azalea Series with special reference to crosses made between these and other series of rhododendrons and the difficulties in connection therewith. Crossed within the series they give us not only some of the most beautiful results but also are easy to raise and, flowering as they do at a very much earlier stage than the big leaved crosses, are of especial interest to those amateurs who wish to begin this fascinating work of hybridization. A few notes in this connection may therefore be of value.

The deciduous American azaleas have been crossed with Chinese and Japanese by many nursery gardeners with excellent results which decorate our gardens in May. The Dutch have worked principally with *molle* and *japonicum*. These two closely allied species come, the former from China and the latter from Japan, and as these names have replaced "sinensis" and "mollis," confusion is apt to occur. *Molle* of to-day is a fine orange azalea with a darker blotch and has been introduced both by Forrest and Rock recently from China, both forms being equally good and both being equal to, if not better than, many of the hybrids resulting from crosses between the Chinese and Japanese closely related species.

Now anybody with a plant of *molle* (true) could be certain of success in raising azalea hybrids if he crossed this with any of the large flowered, bright azaleas of commerce, and would probably have very few plants to discard after raising a batch of seedlings.

Koster has managed to fix a race of flame-orange flowered *molle-japonicum* hybrids, which he calls his "brilliant orange mixture" and which come true from seed. They must, however, obviously be hand fertilised to avoid the bee playing the part of the villain.

The late Anthony Waterer and his father before him were probably fonder of azaleas than of any other shrub and used to make many hybrids, but the younger Anthony in his latter days was an eccentric individual as, being unmarried and having ample means for his modest requirements, he liked to gloat over the best of his azaleas and glory in their being in his collection only. He used to take one round his nursery and show these to the favoured few he wished to impress with his skill, and when one suggested that that plant would be admirable at Exbury, for instance, he always said that he was very sorry he had marked it to go to his own garden, a garden which consisted only of a few square yards where he grew a few herbaceous plants and the vegetables he needed for his own use, but *never* an azalea. However, a few of them were distributed to some of his particular favourites and, needless to say, some of the best went to Caerhays and Lanarth, and I am glad to say a few came to Exbury before he died.

At Caerhays some of these azaleas have been re-crossed with admirable results and one which was shown by A. M. Williams as *Magog* received an award of merit, and was undoubtedly one of the best orange azaleas shown to date of its type. These, unlike the Dutch azaleas, though they must have a little of the molle-japonicum blood in them to give them their size, owe most of their beauty to the influence of the American azaleas which old Anthony Waterer had imported from the United States and which he used with such skill in the production of his famous race of hybrids. I was fortunate enough to have a large yellow azalea called *George Reynolds*, which came from his nursery, and some of his unnamed orange ones with a deep blotch, and these crossed together produced a very similar flower to that of Williams and received an award of merit at Chelsea last year as *Hotspur*.

Unlike rhododendrons, these hybrid azaleas can be

crossed together with good results, as there is no really bad azalea in their parentage such as is required in the hybrid rhododendron, like *ponticum* or *catawbiense*, to give hardiness, and while the garden hybrid rhododendrons will revert to a mauve colour if crossed together, the azaleas will not do so. But the simile of the paint box must not be used when making these together. A red on to an orange may give an orange red, but it is better to make pinks with pinks, whites with whites, yellows with yellows, than to mix colours, and if this is done the colours come more or less true. A molle-japonicum hybrid such as *Floradora* can be crossed with Anthony Waterer's yellows or reds to give good results, but the better the parent, the better its offspring, and it is no good crossing a small flowered hybrid with a medium sized one and expecting large flowers.

Once when I was at Knap Hill Anthony Waterer told me he had crossed a molle-japonicum hybrid with an evergreen Indian azalea and he gave me a pod of seed, but when I raised and flowered the seedlings they were all pure varieties of molle-japonicum—the bee had done its work too well and there was no trace of Indian azalea in the result, nor do I think they would cross together. But that does not mean that from the so-called Indian azaleas themselves a fine collection could not be obtained with near relatives of the family.

The Dutch have found out the value of *Kaempferi*, and the *Kaempferi-malvatica* hybrids which are now on the market are strikingly beautiful examples of their cleverness, but the hybridization in this section is only beginning. *Hinodegeri* crossed with *Kaempferi* has produced a fine race of bright flowered azaleas at Exbury, some with scarlet flowers and others with bright magenta red flowers. *Kaempferi* has been crossed with a carmine Indian azalea and here again bright red and rosy-purple, very floriferous plants have ensued, perfectly hardy at Exbury in a cold

situation there, whilst *Kaempferi* crossed with *Oldhamii* has given an almost uniform batch of bright red seedlings with the rosy-red blotch of *Oldhamii*, almost mid-way between the two species and habit, though resembling *Oldhamii* more in flower than *Kaempferi*. This again is perfectly hardy at Exbury.

This year many more crosses have been made in this direction and while, of course, three, four or five years must elapse before results are seen, fertile seed pods have been set between *Kaempferi* and many other of the evergreen species of the Azalea Series. That is the real charm of the Azalea crosses—five years, and at most seven, and you know your luck. With many of the large-leaved rhododendrons, using species, you may have to wait anything between ten and fifteen years.

As this year I am confining my article to quick results I will continue with a few notes on the *Griersonianum* hybrids which have appeared up to date: but the crossing of *Griersonianum* is only beginning and the remarks made now can only be taken as preliminary and will no doubt have to be supplemented in another article in but very few years if this series continues.

I think it can be safely recorded even to-day that no rhododendron which has been introduced of recent years will leave its mark so frequently on new garden hybrids as *Griersonianum* and with the advantages that they flower at a very early stage and that the primary hybrids between *Griersonianum* and other hybrids are very constant and are almost all worthy of being grown in the garden if care has been taken in the selection of the other parent—they also seem to be hardy, at any rate in this country. *Griersonianum* itself is a very curious colour to describe: Forrest called it geranium red, but soft vermilion scarlet seems to be more appropriate, but whatever it may be it has the curious knack of intensifying the scarlet in red rhododendrons and

intensifying the blue in those rhododendrons which may have a slight magenta shade in them, due to the influence of *ponticum* or *catawbiense*. For this reason it is but little use crossing *Griersonianum* on to the hardy late hybrids such as *Mrs. Kelke* or *Lady Annette de Trafford* or, in fact, any of the older hybrid rhododendrons which have a shade of mauve in the red or pink; the results always show pink flowers with a distinct tendency to a blue tinge, like some of the older pink phloxes. Crossed with some of the purer colours, such as *B. de Bruin* or *Essex Scarlet*, they give excellent results of a fine red, and with some of the newer seedlings they give even better results.

The first *Griersonianum* hybrid ever to be exhibited was one by Lord Aberconway at Chelsea, which he named *Vanessa*, between *Soulbut* and *Griersonianum*, and received a unanimous First Class Certificate, but I am bound to say the tent at Chelsea favoured it somewhat, as though a very beautiful hybrid it is not so fine outside as many others which have been raised since and which have not received the coveted award, its colour being slightly tinged towards the blue, due no doubt to the influence of *Mrs. Butler*, which is always apt to give a slight mauvy tinge to its offspring.

I suppose the most scarlet hybrid that has been produced was shown by Leonardslee and Embley Park—*Tally Ho*—and is a cross between *Griersonianum* and *eriogynum*. This also received a unanimous First Class Certificate, and there is no doubt that where it can be grown in southern gardens it is a very fine hybrid: but so is the cross with *haematodes* named *May Day*, shown by Alfred Williams, which is also a magnificent scarlet, while crossed with *dichroanthum* by Lord Aberconway it has produced *Fabia*, which is almost as good. Crossed with *didymum* by Kew it has produced *Arthur Osborn*, and all these primary crosses, coming as they do constant from seed and flowering at an early age, are within the possibilities of any amateur, who can easily raise

with a little trouble a stock of hardy free-flowering plants which will give him much pleasure as a front border to his bigger rhododendrons, though *Tally Ho* may eventually have to go further back.

Crossed with *discolor* it has given a soft pink, which received an award of merit, but this I think will be improved with further crossing, while with *Griffithianum* it is distinctly disappointing.

Crossed with *neriiflorum* it has produced at Bodnant a rhododendron sufficiently good to be called *F. C. Puddle*, which received the same award as the Committee gave to *May Day*.

At Exbury it has been used frequently and with Moser's *Maroon* it has given *Romany Chai*, and this rhododendron is very constant, most of the results being equally good. Crossed with *Dawn's Delight* it has given *Dolly*, somewhat similar in colour to *Vanessa* but rather brighter. Crossed with *B. de Bruin* it has given *Mrs. Leopold de Rothschild*, also pretty constant, and these three have all received awards of merit from the Royal Horticultural Society. Crossed with *Cetewayo* it has given somewhat similar results to those with Moser's *Maroon*, but much less constant and not so good. Crossed with some of Lowinsky's hybrids some fine results are being produced, but these are only just beginning to flower, while crossed with the hardy Waterer hybrids the results, as I have mentioned above, are disappointing and are being gradually discarded. All the earlier mentioned crosses and many more have been made by me and some flowered, and last year I could not distinguish between the Exbury, Leonardslee or Embley Park *Tally Ho*.

Koster exhibited some startling red rhododendrons as a result of some of his work with *Griersonianum*, and these will doubtless be on the market in due course, while *Cavalcade*, shown by Waterer Sons & Crisp, is probably a cross between *Essex Scarlet* and *Griersonianum*.

As I have already stated, the great attraction of Griersonianum hybrids seems to be the character that they flower at an early stage of their existence, though as the flowers themselves come late, towards the end of May or June, they are reasonably safe from frost, and the beginner might do far worse than try his hand with this grand species.

Canada, where he has planted some rhododendrons and azaleas, has sent a report of his success and failure, and the following extracts may be of interest. The Station is 22 miles W.N.W. of Altonah in the Laurentian Hills. The soil here is loam. The climate is stated to be about the worst in the world and fit only for hares and bears, snow usually commencing to fall about the middle of November and remaining on the ground till the middle of April. In 1891 January was a bitter cold winter - a record for the worst of years. In 1892 the winter was less severe.

1894.

Jan	...
Feb	...
Mar	...
Apr	...
May	...
June	...
July	...
August	...
September	...
October	...
November	...
December	...

It is not surprising to find that under these conditions the plants which do best are the old Watson hybrids with the most of the stock and protected from the winter cold.

NOTES FROM GARDENS OVERSEAS.

One of our members, Mr. Charles M. Black, who has a garden at Ste. Marguerite Station, County Terrebonne, Canada, where he has planted some rhododendrons and azaleas, has sent a report of his successes and failures, and the following extracts may be of interest.

The Station is 53 miles W.N.W. of Montreal in the Laurentian Hills, 1,000 feet above sea level. The climate is stated to be about the worst in the world and fit only for Eskimos and bears, snow usually commencing to fall about the middle of November and remaining on the ground till the middle of April. In 1934 January was a bitter cold month :—

1934.

January ...	maximum	36°	minimum	— 27°
February ...	„	28°	„	— 35°
March ...	„	45°	„	— 14°
April ...	„	66°	„	14°
May ...	„	84°	„	27°
June ...	„	91°	„	33°
July ...	„	89°	„	47°
August ...	„	86°	„	38°
September	„	80°	„	42°
October ...	„	62°	„	26°
November	„	54°	„	15°
December	„	50°	„	— 19°

It is not surprising to find that under these conditions the plants which do best are the old Waterer hybrids with *maximum* or *catawbiense* blood in them. Azaleas are also satisfactory, though these being covered with snow during most of the frost, are protected from the extreme cold.

Japanese Azaleas, such as *Hinemayo*, are reported to have lost their leaves and did not flower though still alive, *ledifolia*, *macrantha* and *Maxwellii* being practically exterminated.

With regard to the species, *Cunningham's Sulphur*, which by many is considered the equivalent of caucasicum, is perfectly hardy and so is *brachycarpum* : *fictolacteum* was killed out in two years : *auriculatum* killed : *campylocarpum* stood one winter, then killed : *decorum*, killed : *discolor*, one killed, one cut to ground : *Fargesii*, one killed, one half killed : *dichroanthum*, three plants so far survived, but again these were covered with snow : *racemosum*, out of twelve plants six alive : *catawbiense*, hardy : *croceum*, died : *maximum*, hardy : *Smirnowii*, hardy : *Ungernii*, hardy.

Many more plants were planted in the spring of 1934 and it is sincerely to be hoped that success will attend Mr. Black's efforts to grow rhododendrons in this very uncongenial climate.

As a contrast to this a long letter has been received from New Zealand, where in a much milder climate some of the tenderest species of rhododendron can be grown better, or at any rate flower earlier than in our climate. The following extract written on the 10th December, 1934, may interest members of the Association :—

“ *R. stenaulum* bloomed very well with me this year in the open. It seems much hardier than you supposed when you gave it to me for its bloom buds are never cut by frost even when those of *R. Maddenii* are nearly all killed. Apart from its fragrance, there is an orchid-like appearance to the flower of *stenaulum* that is very appealing.

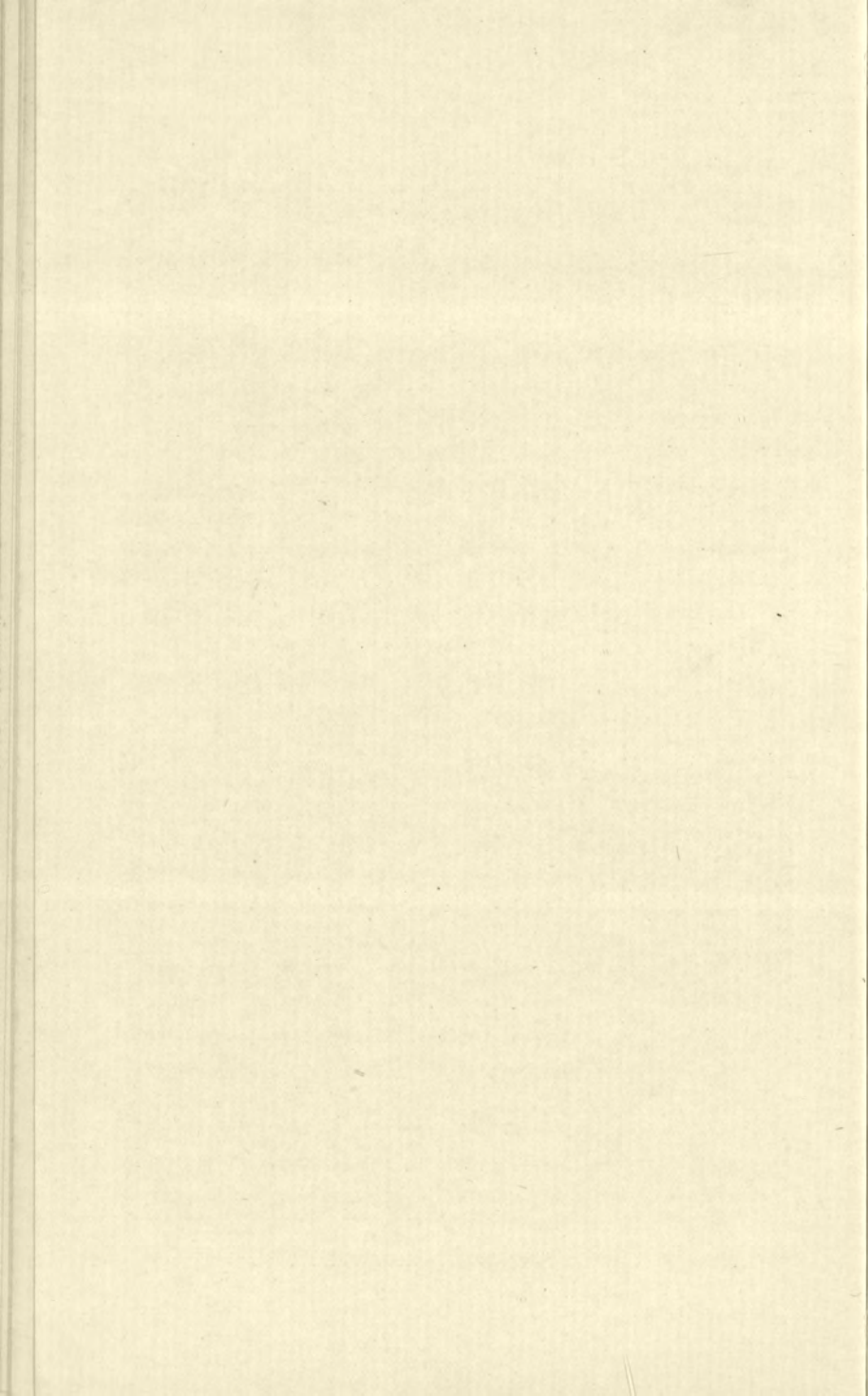
“ *R. sidereum* has bloomed with me sparingly for the past two seasons but this year did so profusely. It is one of the most attractive of the Grande Series and certainly the best yellow among them that I have seen. My best one is a pale canary yellow, and although the blooms are smaller than

those of *grande*, their colour is better and they open at a time when all danger from frost is past. The plant stands our dry climate very well indeed. For cultivation here it is 'four star.'"

Rhododendron giganteum flowered last year for the first time in cultivation in Mr. Stead's garden in New Zealand, and by his courtesy a photograph of the flower is reproduced.



RHODODENDRON GIGANTEUM



REPORT OF RHODODENDRON SHOW, May 1st and 2nd, 1934.

By E. J. P. Magor.

The Show this year was a good one, both as regards the quality and quantity of the exhibits and the attendance, which I heard was most satisfactory on the first day, and which seemed above the average on the second. The general public is evidently beginning to appreciate the resources of the genus, which supplies beautiful flowering shrubs for large and small places, and even for the smallest rock garden. It provides tender species and hybrids for those who have a temperate house or a large greenhouse: some which thrive best on the western and southern coasts and others which will stand without injury the most rigorous frosts which visit these islands. The diversity of flower and foliage is amazing and the uninitiated often find it difficult to believe that certain species are rhododendrons at all. Yet the rhododendron is hardly at its best in the show-room, and though it is well that people should see it there and get some insight into its varied beauty, it behoves them yet more to seek it at home in some of the larger gardens in the country, many of which are thrown open in the spring, and where they will see it flourishing among congenial surroundings.

Class I, for a group of plants in or out of flower and shown by a trade exhibitor, was won by the Knap Hill Nursery, who staged a particularly pleasing exhibit, to which was awarded the Rothschild Cup for the most meritorious stand in the first three classes. Their plants were not very large, but well arranged and well balanced, and there were many scarce things among them, all in the best of health. *R. pubescens*, K.W. 3952, a small-flowered white tinged pink proved itself a better plant than it is usually considered, and *Snow Queen* was a lovely hybrid. There was a seedling of the

new *cilpinense* (ciliatum x moupinense) and a thriving bush of the difficult *Genesterianum*. Messrs. Gill were second and had a fine lot of plants, among which was a *sinogrande*, a *Falconeri* and a hybrid, all of large size, but their arrangement was hardly as good as the preceding. Included in their lot was a small *venator*, covered with flower, a *Loderi* in bloom, *orbiculare* and *tsangpoense*, a dwarf shrub with delightful mauve flowers. Messrs. Hillier were third, and they had a good plant of *basilicum*, but flame-coloured azaleas do not go well with rhododendrons. Mr. Reuthe had some interesting species, such as *regale*, which by the way is *basilicum*, *Wightii* and a good form of *reticulatum* under the old synonym of *rhombicum*; but his group was not up to his usual standard and may be he had had rather more than his share of the spring frosts which had affected many of us.

Class 2, for hardy rhododendron plants in flower, was won by Messrs. Slocock, followed by Messrs. Waterer, Sons & Crisp, Messrs. Wallace & Co. being third. The leading exhibit was well arranged and, in addition to numerous campylocarpum hybrids, contained *Wightii*, *Broughtonii aureum* at its best and an outstanding purple form of *Wallichii*. Their hybrid *Buttercup* was a beautiful thing and the cream *Souvenir de W. C. Slocock* was awarded the prize for the best plant in the Show. Messrs. Waterer, Sons & Crisp had some effective standard rhododendrons, a good form of *pseudo-yanthinum* and a *discolor* hybrid of a pretty shade of pink. Messrs. Wallace & Co. had some nice things, among which were *Rajah*, a fine moderate-sized red, *Harvest Moon*, some *croceum* hybrids, *Gipsy Maid* and *Diana*, a lovely cream.

Class 3 was for a group of cut flowers, and I cannot say that the trade made a success of it. Messrs. Gill were given first prize and Mr. Reuthe third, but the blooms were cut singly and massed together so that they did not look as well as they might have done, though Messrs. Gill's *Falconeri* in

the centre of their stand broke the monotony and were a move in the right direction. Possibly the definition "cut flowers" in distinction to "cut rhododendrons" in the two following classes intimidated the exhibitors, but there was no comparison at all between Class 3 and Classes 4 and 5, both of which were very good indeed.

Mr. Lionel de Rothschild was first in the larger class with a magnificent group which won the cup for the best amateur exhibit, and in this the arrangement was altogether excellent. Great branches of *red hybrid rhododendrons* in the centre with pale yellow *campylocarpum* on either side, these being flanked by the blue *Augustinii*: and in front any number of beautiful species and hybrids. Among the latter *Naomi* and the striking *Lady Chamberlain* hybrid, whilst the former included the smoky lavender *chasmanthum*, the dark red *microgynum*, *chaetomallum* in better health than it usually is and *myiagram* (of the *Campylocarpum* Sub-series), which is white with a dark blotch. Second to him was Admiral Heneage-Vivian, who staged tall sprays—red, white and cream: *Griffithianum*, *Maddenii* and many more of the tender scented varieties. There was not the same variety as in the preceding, but the effect was very pleasant.

Class 5, the smaller one for cut rhododendrons, is always interesting, for in this Mr. J. C. Williams competes, and this year Colonel Stephenson Clarke was a very good second to him, and both showed a number of uncommon species and fine hybrids. The Caerhays stand included a yellow *Edgeworthii* hybrid, *Roylei* × *Maddenii*, a *dichroanthum* hybrid and *impeditum* × *Augustinii*, and of species, *Taggianum*, *floccigerum*, the tender *Mackenzianum*, *Genesterianum* and the charming azalea *Albrechtii*. Whilst Colonel Clarke put up branches of *Fortunei* × *Thomsonii*, *Mrs. Butler* × *campylocarpum* and *argyrophyllum*; also a truss of his new hybrid *Grand Slam*, a magnificent red. *Nuttallii*, *Victorianum*, *nilagiricum*, *carneum* and *burmanicum* were other varieties represented.

There were no entries for Class 6, which was for a group of alpine rhododendrons. This was disappointing. Possibly it was too strenuous a job for most amateurs, but the Trade, who are accustomed to moving stones, might make a very attractive little rock garden of it and it is to be hoped that one or two may try it next year.

Turning to the small classes, Lord Stair had the best twelve species, as he has often done before, and as usual they were beautifully fresh and well grown. *Taggianum*, *Maddenii* var. *Jenkinsii* and a wonderful *bullatum* testified to the climate of the west of Scotland. Lord Aberconway was second, having a good *lanatum* and one of the Sanguineum Series, yellow with a pink lip; and Mr. de Rothschild third with *lacteam*, *orbiculare*, *caloxanthum* and a yellow variety of chaetomallum. A good flower of *Hodgsonii* was noticed elsewhere.

Lady Loder deservedly won the next two classes for the twelve hybrids, and the Crosfield Cup for four hybrids raised by the exhibitor. *Sunkist*, *Coralia* and *Rosa Bonheur*, a beautiful large pink, were perhaps her best flowers. Mr. de Rothschild and Lord Aberconway had some excellent flowers in this class, a large *bullatum* hybrid, *F. C. Puddle*, *Naomi* and *Lady Chamberlain* being some of the most remarkable.

Mr. P. D. Williams was first in the class for three species against strong opposition, showing *blood red arboreum*, *decorum* and a very large *neriiflorum*. Mr. de Rothschild was second with *lacteam*, *campanulatum* and *caloxanthum*; and Lord Aberconway third with *rhantum*, *euchaites* and one of the Sanguineum Series.

The corresponding class for hybrids was won by Lord Swaythling with *Fortunei* × *campylocarpum*, *Richard Gill* and the *Earl of Athlone*, which still holds its own with the newer hybrids. Lady Loder was second with *Loderi*, *Coralia* and *Red Glow*, and Mr. P. D. Williams third with *Thomsonii* × *Fortunei*, *campanulatum* × *Fortunei* and *Griffithianum* ×

arboreum. A fine *Falconeri* hybrid, perhaps with *niveum*, was also shown.

Colonel Bolitho's splendid Taggianum was the best species, followed by Major Johnstone's *Delavayi* and Mr. de Rothschild's *lacteam*: and Admiral Heneage-Vivian's *W. Leith*, a glorious seven-lobed pale yellow, achieved the Loder Cup for the best hybrid.

Class 14 for one truss of *arboreum* or its sub-series was won by Mr. Crosfield with a magnificent red *arboreum*, Lord Stair being second. Mr. Crosfield's cultivation was unsurpassed this year and one wonders what his method is.

The next class for any other of the Arboreum Series was won by Sir Francis Acland with a first rate *Delavayi*, Lord Wakehurst's *argyrophyllum* receiving second prize. Dr. Stoker's *habrotrichum* excelled in the Barbatum Series, followed by Admiral Heneage-Vivian's *glischrum*, and Lord Wakehurst's *habrotrichum* was highly commended.

R. tephropeplum won the class for the Boothii Series for Colonel Bolitho, and Mr. de Rothschild was second with *deleense*, a little-known plant which has darker flowers than the preceding.

The best truss of *Falconeri* was shown by Mr. Stevenson, followed by Mr. Crosfield, who was also second to Major Johnstone in the *fictolacteam* class: whilst in Class 21 for other members of the *Falconeri* Series, Mrs. C. M. Whittall was first with *eximeum* and Lord Wakehurst second with *basilicum*.

Major Johnstone and Mr. C. E. Heath were respectively first and second with their blooms of *Griffithianum*, and the next class for others of the Fortunei Series was won by Mr. Magor with *Houlstonii*, Lord Swaythling's *orbiculare* being second.

Lord Swaythling won the *fulvum* class and Captain Talbot Fletcher was second, but there was only one entry for the Grande class—*peregrinum*, which was given a first.

The early Irroratumms were getting over and the best bloom shown was *Morii*, unfortunately not belonging to this series. *R. laxiflorum*, a new-comer, was noticed in this class. Mr. de Rothschild had the best truss of *lacteum* and he was also first in the Megacalyx Sub-series with a very fine specimen of *Nuttallii*.

Class 29—others of the Maddenii Series, was won by Admiral Heneage-Vivian with the type, Mr. Ingham Whitaker's *Lindleyi* being second. The type also won in the Haematodes Sub-series with a variety of *chaetomallum* second and in the Neriiflorum Sub-series *euchaïtes* was first with the type second.

There was considerable variety in the Sanguineum Sub-series, Lord Aberconway's orange-yellow flower with a pink edging winning, and *sanguineum* itself being second: the orange *scyphocalyx* and the almost black *horaeum* also appeared.

Lord Stair was successful with the best *Thomsonii* I have yet seen and Mr. Ingham Whitaker second.

Then came deciduous azaleas, Colonel Stephenson Clarke being first with *Schlippenbachii* and Mr. Stevenson second with *Vaseyi* for a single spray; and for the three sprays Mr. Wilding first with *Schlippenbachii*, *Albrechtii* and *quinque-folium*, and Lord Aberconway second. These were two very beautiful classes, *Schlippenbachii* particularly being at its best.

Mr. Wilding also had the first evergreen azalea and Lord Aberconway the best Kurume.

In Class 42 Mr. Crosfield showed a first-class *bullatum* and Lord Aberconway's pink *anthopogon* was victorious in the Cephalanthum Series.

In the Glaucum Class Captain Talbot Fletcher won with a good variety of the type, *charitopes* being second.

R. desquamatum was not successful in the Heliolepis Series this year, an excellent *rubiginosum* getting the better of it.

In the Lapponicum Class there was very strong competition and Mr. Magor's *russatum* was placed first, with Lord Wakehurst's *cantabile* second: a very nice bit of *rupicola* was also shown.

The best Augustinii was shown by Mrs. Blathwayt, and Mr. Stevenson headed the Polylepis Series.

Mr. Crosfield's *timeteum* was first in the Oreotrephe Sub-series, and Mr. Magor's pink variety of *Davidsonianum* was successful in the large Yunnanense class, with Mr. de Rothschild's *eriandrum* second.

Mrs. Banks won the Triflorum Sub-series with *ambiguum*, and Mr. Wilding the Trichocladum Series with the type.

R. racemosum was first and second in Class 53, and the next class for a species not included in the schedule was won by Lord Aberconway with a very early *Roylei*, to which Lord Wakehurst's *adenopodum* was second. A queer little yellow *cinnabarinum*, KW 5,874, was also exhibited in this class.

Among the Lepidotums *R. imperator* beat the larger *Baileyi*, and *riparium* was second to *saluenense* in the following class. *R. pemakoense* was also in this class and probably has the largest flower in the series.

R. campylogynum was first and second in its own class, and *repens* was the only entry in the Forrestii Sub-series. Mr. Ingham Whitaker won the Kewense class with a superlative *Loderi*, and Mr. Stevenson's *Penjerrick* was first in the class for Griffithianum crossed with a species.

Lady Loder produced a lovely white flower to win in the class for Griffithianum crossed with a hybrid, Mr. de Rothschild's *Don cross* being second.

The neriiflorum hybrids showed a distinct advance, *F. C. Puddle* (neriiflorum \times Griersonianum), and the other cross with Prometheus being quite delightful.

R. Penjerrick was supreme among the campylocarpum-Griffithianum hybrids, and the best crosses of campylocarpum

with any other species or hybrids was that with *Fortunei*, but *Dairymaid* was a very pleasing flower in this class.

R. Loderi × *Thomsonii* was chief among the *Thomsonii* crosses, and among *Griersonianum* hybrids *F. C. Puddle* gained the premier award.

For the interspecific hybrid not previously mentioned no first prize was given, and the best hybrid raised by the exhibitor was Mr. de Rothschild's *Moser's Maroon* × *arboresum* var. *Kermesinum*.

There were no entries for Classes 69 and 71, whilst *Lady Chamberlain* was first among the *cinnabarinum* hybrids.

The finest alpine hybrid was *impeditum* × *Augustinii*, *Blue Tit* as it is now named, and there was no entry for Class 73.

Messrs. Waterer, Sons & Crisp were first with six hardy hybrid trusses, *Blue Peter* being a fine *campanulatum* cross.

Miss Elizabeth and Mr. John McLaren showed a beautiful lot of leaves, each with tomentum and considerable substance, and ranging from *sinogrande* and *praestans* down to *Wasonii*. Mr. de Rothschild and Lord Stair also had some good leaves.

In Class 76 Miss Baring had a very creditable little trio including *eriandrum* and a blue *Augustinii*.

An intensely interesting feature of the Show was the evolution and geographical distribution of the genus compiled by Mr. J. Hutchinson. It included drawings from the Kew Herbarium, some of them coloured, and the approximate number of species so far discovered in various countries. China, of course, is the headquarters, but I think it was news to most of us that about a hundred had been found in New Guinea. The evolution of the genus as described was highly scientific and probably above the head of almost everyone, and the descent of the *Rhododendrons* from the *Magnoliaceae* must have been a process which took millions of years.

At the top of the hall Lord Swaythling staged a group of the flowers of hybrids between *Fortunei* and *campylocarpum*. And a very pleasant group it was, for the form of the flowers

and the delicacy of their colours was one of the most beautiful things in the Show.

A First Class Certificate was given to *R. scintillans* shown by Mr. de Rothschild, and an Award of Merit to *Sussex Bonfire* (haematodes x Cornish Cross), a splendid dark red shown by Lady Loder. To *Williamsianum* x *orbiculare* from the Director of Kew : to *Fortunei* x *campylocarpum* from Lord Swaythling : to *crebreflorum* (KW 6,967), from Colonel Messel : to *caloxanthum* and *Bibiani* from Mr. de Rothschild and to *Cunningham's Sulphur* from Mr. Harry White. *Mrs. Linley Messel*, an attractive pink natural hybrid from *orbiculare*, and *R. Johnstoneanum*, a pale yellow of the ciliicalyx sub-series, were other notable flowers.

And so farewell to the Show of 1934, and I think I may add that the Rhododendron Association tenders its most grateful thanks to the Judges, who gave their knowledge and time, and to the R.H.S. officials, who were so competent and helpful, both of whom contributed towards making it the success it was.

THE RHODODENDRON

BALANCE SHEET,

	£	s.	d.
Subscriptions paid in advance		16	1 0
Sundry Creditors		58	3 0
Life Members' Fund as at 1st January, 1934	£189	0	0
Add One Life Subscription received during 1934	15	15	0
		204	15 0
Accumulated Fund—			
Balance at 1st January, 1934	£85	11	10
Deduct : Excess of Expenditure over Income during the year ended 31st December, 1934	27	19	9
		57	12 1
		<u>£336</u>	<u>11 1</u>

I have examined the above Balance Sheet and accompanying Association and certify that they are correct. I have ascertained that names of the Trustees.

J. B. STEVENSON, *Hon. Treasurer.*

Dr. INCOME AND EXPENDITURE ACCOUNT

	£	s.	d.
To Secretarial Expenses		105	0 0
„ Printing and Binding 1934 Year Book		336	0 0
„ Rhododendron Society for “The Species of Rhododendron” and Notes		13	13 6
„ General Expenses—			
Stationery and General Printing	£5	6	9
Postages, Carriage and Sundries	10	18	11
Audit Fee	3	3	0
Royal Horticultural Society Affiliation Fee	1	1	0
Despatch of Year Book to Members	11	11	8
		32	1 4
		<u>£486</u>	<u>14 10</u>

SHOW ACCOUNT,

	£	s.	d.
RECEIPTS.			
Gate Money, Royal Horticultural Society		18	12 0
Donations		87	6 0
Donation for Special Prize... ..		2	2 0
		<u>£108</u>	<u>0 0</u>

ASSOCIATION.

31st December, 1934.

	£	s.	d.	£	s.	d.
Cash at Bank	159	13	9			
„ in Hand	3	12	4			
				163	6	1
Investment (Life Members' Fund)—						
Funding Stock 4 per cent., 1960/90,						
£192. 17s. 5d., at cost				173	5	0
(Market value at 31st December,						
1934 = £231.)						

£336 11 1

Income and Expenditure Account with the books and vouchers of the the Investment shown above is inscribed at the Bank of England in the

E. P. RICHARDSON, *Chartered Accountant*,
3, Broad Street Buildings,

6th March, 1935.

Liverpool Street, E.C. 2.

for the year ended 31st December, 1934.

Cr.

	£	s.	d.
By Members' Subscriptions	404	17	6
„ Dividends (<i>less</i> tax) on Investment representing Life Members' Fund	5	17	7
„ Sales of Year Books, "The Species of Rhododendron" and Notes	20	15	1
„ Show Account—Surplus on 1934 Show	27	4	11
„ Accumulated Fund—			
Excess of Expenditure over Income during the year	27	19	9

£486 14 10

1934.

PAYMENTS.

	£	s.	d.
Prizes	58	2	0
Medals	1	10	0
Advertising	4	2	0
Printing and General Expenses	17	1	1
Surplus (see Income and Expenditure Account) ...	27	4	11

£108 0 0

