ISSN 1649-1173

POLLINIA

NEWSLETTER OF THE IRISH ORCHID SOCIETY

Volume 7, Issue 4 An Samhradh July 2009

Cumann Magairlíní na hÉireann

Brassavola cuculatta

The Wild Orchids of Saba, Netherlands Antilles
Part II: A Field Guide

IN THIS ISSUE:

THE IRISH ORCHID SOCIETY COMMITTEE

Shane Kerr (Chairman)
Mary Flynn (Hon. Treasurer)
Marie Hourigan (Secretary)
Michael O'Leary (Fund Raising)
Scott MacNaughton
Olwyn Lanigan

POLLINIA

(pol-LIN-ee-uh)

The compact packets of pollen found in orchid flowers. Plural of *Pollinium.*

Waxy pollen clumps or grains usually found in the anthers of most orchids; often yellow, distinct, and found under the pollen cap of the column.

Pollinia contain the male reproductive cells.

Latin *pollin-*, stem of pollen

IOS MEMBERSHIP DETAILS

ANNUAL SUBSCRIPTIONS
(renewable in June of each year)

❑	Adult Single	€20.00
❑	Family	€30.00
❑	OAP/Student*	€15.00

(*Confirmation of student status required)

Please make cheques or PO payable to :
The Irish Orchid Society

Applications and other society communications should be made to the **Secretary:**

Marie Hourigan, Secretary
Irish Orchid Society
c/o National Botanic Gardens
Glasnevin, Dublin 9, Ireland

Editor: Laurence T. May

The Editor reserves the right to edit and/or amend articles submitted to the Newsletter. The views or comments published within this Newsletter are not necessarily views shared by either the Editor or the Irish Orchid Society. © 2009.

Contributions of articles, pictures and comments should be sent by email to:
editor@pollinia.org
or by post to:
Laurence T. May,
Bellarush,
Castlebaldwin, Co. Sligo, Ireland

Copies of this and previous are issues available at: ***http://www.pollinia.org***

Cumann Magairlíní na hÉireann

A NEW CATALOGUE OF ORCHIDACEAE FOR SABA, N.A.

Chipka, Stewart A., Izquierdo, Jose A.

Selbyana
Volume 26, Issue 1
(September 2005)

Chipka, S. A. and Izquierdo, J. A. 2005. **A new catalogue of Orchidaceae for Saba, N.A.** *Selbyana* 26 (1-2): 14-22. Marie Selby Botanical Gardens

The Orchidaceae on the island of Saba, Netherlands Antilles, have been briefly studied and described. Beginning in January of 2003, in cooperation with the Saba Conservation Foundation, an on-going orchid population study of this island has been established that is expected to continue for at least three years into the future. Unique in its geology, as well as its lack of serious tourism impact, the island of Saba provides a distinct research environment for Caribbean Island orchid habitation and ecology data. To date the study has identified thirteen species within eight genera of Caribbean orchids that may be considered naturalized. A unique copper form of Epidendrum ciliare has been located which presents possible indications of variation from the usual Epidendrum ciliare Caribbean types. Orchid populations have been identified and GPS located for utilization in future studies. Populations of significant size have been map plotted for use by the Saba Conservation Foundation in its land based environmental management programs. This paper addresses species recordings of the Saba Orchidaceae, with previous historical citations, to date of publication. (2005)

The Orchid species located on the island of Saba have been discussed briefly in the available literature regarding the Orchidaceae. Contrary to what has occurred on larger Caribbean islands, no prior systematic, *in situ* island-wide survey of Saba has been attempted or published. Starting in December 2002, an on-going population survey has been initiated with the additional purpose of establishing a more fully detailed study of Saban orchid population ecology.

Howard (1974) annotated ten Orchidaceae species for Saba. Of those, we have been able to confirm that four of these originally annotated species are populating the island.

Additional, and previously unrecorded, species have also been located in the delimited zones of study, areas below 500 meters in elevation. The ecological zone above 500 meters is expected to reveal island cloud species previously unrecorded for Saba.

STATUS REPORT ON THE SPECIES DESCRIBED BY HOWARD

Epidendrum ciliare L.

Verified throughout the island as the most common species *in situ* below 500 meters in elevation. Flower form and color variations, noted in the description by Howard, do not include the copper form located in the Northeast quadrant. We attribute this to the currently limited locations of the copper form present and a possible lack of this form in herbarium samples examined by Howard.

Epidendrum secundum Jacq.

The confusion about the identification and, possible synonymy, of both *Epidendrum secundum* and *Epidendrum anceps* based on the misapplications of drawings by Plumier was solved by the action of the I.A.P.T deciding that only Jacquin types were to be used to typify Jacquin described species. As a result both species, *Epi.anceps* and *Epi.secundum*, are accepted as distinct species. Both *Epi.secundum* (in limited locations) and *Epi.anceps* (on an island wide basis) populations have been identified and mapped for Saba.

Epidendrum pseudoramosum Schltr.

Howard (1974)[1] states that the examined specimen was located in the Rendezvous area (our Southeast quadrant, altitude ranging from 200 – 400 meters). Kew (2003) reports a distribution pattern of the species from Mexico to Venezuela that tends to preclude the possibility of natural distribution of the species to Saba; it flows from Mexico to Venezuela down Central American to Venezuela in the Northern coast of South America. As of this report, we have not been able to confirm the species status in Saba. Tom van't Hof, Ph.D., a resident of the area, has not been able to locate it (pers. comm.). This is one of the species we have doubts of confirming location in Saba as a naturalized species.

*Psychilis kraenzlinii (*Bello*)* Sauleda as *Epidendrum Kraenzlinii* Bello

Psychilis kraenzlinii is endemic to Puerto Rico; it has only been reported for Puerto Rico (Ackerman 1995, Kew 2003). There is the very strong possibility that Howard misidentified the plant. The location of a *Psychilis* species is reported for Saba based on a tentative photographic identification by Sauleda (pers. comm.): *Psychilis correllii.* This raises the possibility that it was this species, not *Psychilis kraenzlinii,* which Howard observed.

Epidendrum strobiliferum Rchb.f.,

Howard reported the species for Saba from examined material. As of this report, we have not been able to confirm his report as remaining *in situ* on Saba.

***Erythrodes plantaginea (*L.) Fawc. & Rendle.**

Howard reported having examined specimens of this species from Saba. Boldingh has been credited with observations of the orchid for Florida, St. Eustatius, Saba and St. Martin as far back as 1909 (Howard 1974). We have been unable to confirm the presence of the species on Saba at the time of this report.

***Jacquiniella globosa (*Jacq.*)* Schltr.**

Verified as remaining *in situ* on Saba in the Southeast quadrant at altitudes of 200 – 500 meters as a lithophyte on limited South and Southwest facing cliff faces.

***Brassavola cucullata (*L.) R.Br. in W.T.Aiton**

As of this report, we have not been able to confirm Howard's report. A *Brassavola* species grouping of twenty plants has been located on the Spring Bay trail at elevation 785m in fully exposed conditions, growing as lithophytes. Determination of species awaits flowering.

***Maxillaria coccinea (*Jacq.*)* L.O.Williams ex Hodge**

Verified by Tom van't Hof, Ph.D. in upper altitudes not yet surveyed, primarily growing on the South sides of Mt. Scenery at altitudes between 600 to 800 meters. Further verification of photographs has been provided by Marie Selby Botanical Gardens, Orchid Identification Center.

***Oncidium variegatum* subsp. *leiboldii (*Rchb.f.*)* Withner as *Oncidium leiboldii* Rchb.f**

Although the use of the generic name *Tolumnia Raf.* is accepted and used by many botanists, Kew (2003) doesn't include it in their database, maintaining the use of *Oncidium* Sw. thus, *Tolumnia variegata* (Sw.) Braem is treated as *Oncidium variegatum* Sw. Howard observes that specimens referable to this species have also been listed under *Oncidium velutinum* Lindl. (Kew records this species as *Onc. variegatum subsp. velutinum* (Lindl. & Paxton). Withner and other taxonomists treat it as *Tolumnia velutina* (Lindl. ex Paxton) Braem. A review of the literature reflects that Onc. velutinum is considered endemic to Cuba, reducing the possibility of natural distribution from Cuba to Saba. *Oncidium leiboldii's* published East range boundary is also Cuba, again reducing the possibility of natural distribution from Cuba to Saba. Thus, the probability is that Howard studied a variant of *Oncidium variegatum*, which is a highly variable species (Ackerman 1995, Sauleda & Ragan 1996) or a possible natural hybrid, that do occur in the Caribbean Basin. As of this report, we have not been able to confirm Howard's report, nor have we located any of the other possible candidates for consideration.

CONCLUSION

The authors acknowledge that at the time of this report, the level of progress reported can be considered modest by some: via preliminary identification some additional Orchidaceae genera and species have been annotated for Saba; the validity of some of the currently listed species has been confirmed and in other cases rejected; a new form of a species was discovered and a population of this species is being observed for the identification of its pollinator(s). In addition the lower altitude of the island has been plotted in preparation for further visits to locate additional orchid species; and contact with local residents that share the authors' interest in the preservation of Saba's orchid populations has been developing. In order to conserve, there has to be knowledge of what is being conserved and the relationship of ecological factors that influence the survival of the species under consideration. At this time, the project is but a modest step in the understanding of the Orchidaceae of Saba. Most important, it is a first step in a beginning to the understanding of an island habitat and its orchid population. Continued project efforts will help to provide that knowledge and understanding. The authors would be interested in collaboration on this study with both students who desire field study research time and other professionals who are interested in the Caribbean Basin Orchidaceae.

The research opportunities on Saba are unique and we look forward to future collaborative work in both the field and in the lab areas for advancement of opportunities in this project.

Special interests are in the areas of *Pleurothallis* and *Maxillaria* identification *in situ*,population dynamics analysis, pollination studies, mycorrhizal association studies and genetic analysis of located species. ♦

[1]***Flora of the Lesser Antilles: Leeward and Windward Islands /Orchidaceae***
Howard, R. A.; Garay, L. A.; Sweet, H. R.
Arnold Arboretum, Harvard University, Jamaica Plain, MA (1974)

ACKNOWLEDGEMENTS

I would like to thank Ruben P. Sauleda, Ph. D., for his advice to look into Saba to begin with and his support on an ongoing basis with generous information and assistance. On the island of Saba, N.A., I would like to recognize the aid of: Tom van't Hof, Ph.D., of Ecolodge Rendez-vous, for his contributions of both photographs and information gleaned from over twenty years of independent studies on the island; Lynn and John of SeaSaba Dive Center and Johanna and Vim of Julianna's for their most generous and continual project support; Suzanne Neilson for her encouragement, continual support and introductions to the island; Ed and Pat at the Swinging Doors, who keep me nourished in so many ways. Dos Winkel, lens Meister, thank you. A special thanks to Mike Bechtold for his continual assistance locating orchids in the field study, and to Mary Roduner for her assistance in the identification of moth pollinators. To all the other folks on Saba who helped create and contribute to this ongoing project, my deepest thanks.

The Wild Orchids of Saba, N. A.

Stewart A. Chipka

Director
Saba Biological
Research Foundation

Wild Orchid Field Guide

This field guide includes all the orchid species located during the orchid survey conducted between winter of 2002 to date of publication. In keeping with the format of the study itself the arrangement of orchids presented is done by first, island wide species, and second, orchids by geographic quadrant. This volume contains those orchids found to date growing **below** the line of the cloud forest on Mt. Scenery.

The cloud forest orchids are in a "special" environment and are the subject of a future volume devoted strictly to the cloud forest and its ecology. Technical terms have been minimized to make the guide simpler to use by nonscientists.

Many of the Saban orchids are located on the public trails maintained by Saba Conservation Foundation (SCF). Please keep the hikers creed in mind when using the island trails, "***Take only pictures, leave only tracks.***" Removal of plant material is not only illegal but also destroys elements of the environment that make Saba such a unique hiking experience.

Additionally, several of the island species are already endangered and all orchids, regardless of type or scarcity, are covered by law under the Convention on International Trade in Endangered Species (CITES). Any plants removed from the island are subject to confiscation by Customs authorities, as well as prosecution, both here on the island and at your point of origin when you return home. Help us keep Saba the wonderfully unique nature experience that you would like your grandchildren to enjoy.

Orchids Growing Island Wide

NW	NE
SW	SE

Brassavola cuculatta
Coilostylis ciliaris (Epidendrum ciliare)
Epidendrum anceps
Oeceoclades maculatta
Psychilis correllii

Orchids in the Northeast Quadrant

	NE

Polystachya foliosa

Orchids of the Southeast Quadrant

	SE

Dilomilis montana
Epidendrum difforme
Epidendrum nocturnum
Epidendrum pallidiforum
Epidendrum secundum
Jaquiniella globosa
Maxillaria fulgens
Ponthieva racemosa
Tolumnia prionochilia
Triphora surinamensis

Stairway to Mt. Scenery
A nonstop run of stairs to the top — 1064 in all.

Coilostylis ciliaris (Epidendrum ciliare L.)

NW	NE
SW	SE

Common form with 5-7 blooms per inflorescence (note angle of presentation of flower on right of picture, being just off the horizontal or about 7 degrees up)

This orchid is the most common on Saba and may be found growing in numerous locations as either an epiphyte (growing on tree trunks) or a lithophyte (growing on rock faces). It may be found in a variety of lighting conditions from medium shade to full sun exposure. Its most common occurrences are between the elevations of 400 to 1400 feet in numerous locations on Saba.

On Saba it is called Lady's Lash due to the cilliation of the lip. Very large populations of this plant occur on the cliff faces of the island. The cliffs near the GEBE building on The Road between Windwardside and St. John is a good location to observe this cliff growth. A different color form may be observed on the cliffs just above the gas station at Fort Bay on the eastern cliff faces and western boulder outcroppings.

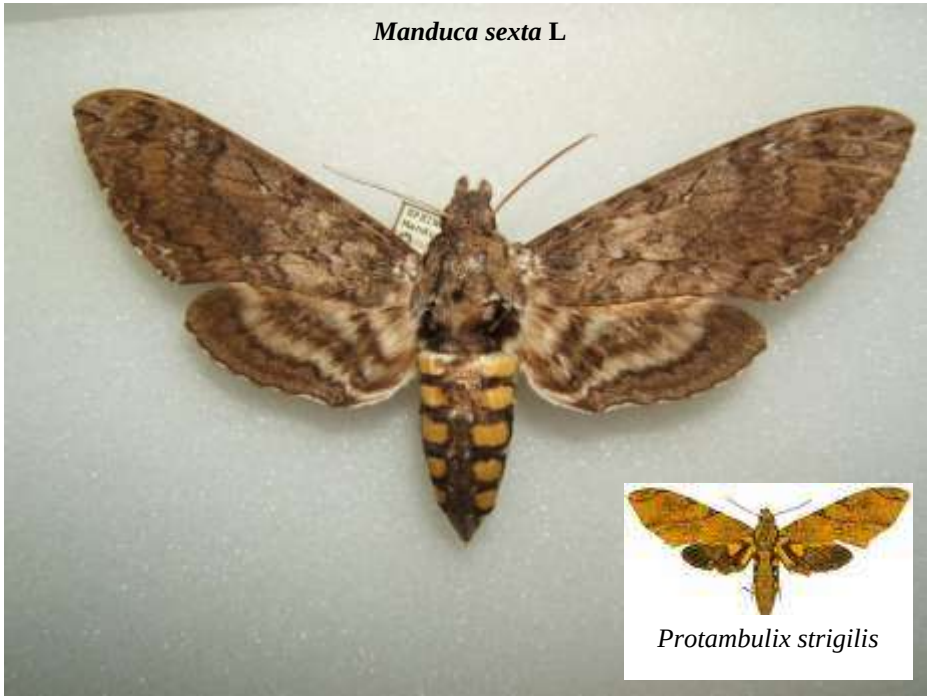
Flowering is in extended alternate rows, with three to five flowers per inflorescence the most common. On the east side of the island however, some plants may be found with five to seven blooms per inflorescence. In the St. Johns area a dwarf form of *C. ciliaris* occurs that are about half the size of other island *C. ciliaris.* A great variety of color forms occur as well as a significant difference in flower size and angle of flower presentation off the inflorescence. Plants may be found in bloom at any time of the year although the months between November and April provide the primary blooming period.

A white or copper colored form that occurs in limited locations on the island has been determined to be a distinct variety (Withner and Harding, 2004) and appears to be endemic to Saba. This form has nine to twelve blooms rather than the more common three to five found generally throughout the Caribbean basin. Our study of this variety indicates that the plant may be in the process of speciation (i.e. becoming a distinct species itself) and that the two distinct colors are related to the substrate on which the plants are growing rather than a genetic color. None the less, the growth characteristics of this type show significant variation from the common Caribbean and Central American species.

***Coilostylis ciliaris* var. Saba** *(copper form) [Epidendrum ciliare* L.*]. Note flower at left rear in comparison to angle of presentation noted above, being significantly higher off the horizontal.*

The white form and copper form grow on boulders that are the result of the last island lava flow and maintain different populations of lichens on their surfaces. This led to an experiment of moving plants from one boulder to another, switching the plants lichen associates. The copper form bloomed out white and the white form bloomed out copper at the next blooming season. This indicates that the lichen material on the boulder is responsible for the color differences, not a genetically based cause.

C. *ciliaris* is pollinated by the hawk moths *Manduca sexta* and *Protambulix strigilis* at night. Another pollinator is *Pseudosphinx tetrio*, although this moth species is rare on Saba. Seed pods are normally about 1 to 2 inches in length x 3/4 to 1 inch in diameter depending on the original flower size, requiring approximately three months to reach maturity.



***Manduca sexta* L.** is a moth of the family *Sphingidae* present through much of the American continent. Commonly known as the tobacco hornworm. Hornworms can get up to seven and more inches.

Epidendrum anceps

NW	NE
SW	SE

This orchid is the second most common on Saba and may be found growing in numerous locations as either an epiphyte (growing on tree trunks) or a lithophyte (growing on rock faces). It may be found in a variety of lighting conditions from medium shade to full sun exposure. Its most common occurrences are between the elevations of 700 to 1200 feet in numerous locations on Saba.

Flowering is in clusters with five flowers per cluster the most common. The small size of the plant and flowers (about 3/4 inches both ways) make this an easy plant to miss even when in bloom. Generally a medium to light green in color an additional color form exists on Saba with a reddish tint to the sepals and petals.

E. anceps is pollinated by the moth *Lymire edwardsii*. Seed pods are normally about one inch in length x 3/4 inch in diameter, requiring approximately three months to reach maturity. Plants require about two years from the seedling stage to first bloom.

Brassavola cuculatta (Cover photo)

NW	NE
SW	SE

This interesting plant may be found growing in numerous locations on Saba as either an epiphyte (growing on tree trunks) or a lithophyte (growing on rock faces). It is usually found facing in a southerly or southwesterly direction in direct light. Flower size of *Brassavola cuculatta* varies from a small three inches across to as much as seven inches. Its terrate leaf growth (thin and tubular) is an easy way to identify the orchid when not in bloom. The most popular locations to view this plant are on the upper areas of Great Hill on the western side of the island growing as an epiphyte and along the upper and middle sections of the Spring Bay Trail on the eastern side of the island. Its most common occurrences are between the elevations of 700 to 1400 feet.

B. cuculatta is pollinated by hawk moths at night. *Manduca sexta* and *Protambulix strigilis* are the most common pollinators for this orchid on Saba. Seed pods are normally about three inches in length x one inch in diameter, requiring approximately three months to mature.

Saba Quadrants Map

Oeceoclades maculatta

NW	NE
SW	SE

This orchid is a terrestrial invasive weed species on Saba, as it is on other islands of the Caribbean. Originally from Africa, its location on Saba is likely due to distribution of the seed on hurricane winds. It may be found in dense to medium shade lighting conditions on the forest floor growing in leaf litter. Its original location was along the North Coast Trail at an elevation of 800 feet on the northerly side of the island during an orchid survey in 2002. Since that time it has spread rapidly to all areas of the island where dry forest and shade provide suitable habitat. The distinct mottled leaves make this an easy plant to identify once it is seen. The mottled pattern provides a somewhat camouflaged plant against the leaf littered forest floor.

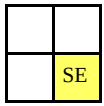
Flowering with several to many blooms at a time, is generally from August to November, on upright stalks. The flowers are self pollinating and produce numerous seed pods which mature quickly. Color ranges from white to a pale yellow. Flowers are about 1/2 inch in length with the seedpods being slightly smaller. *O. macullatta* is most often found with spent seedpods due to rapid maturation of the seed. Maturation of the seedpod is between six to ten days, pods changing from bright green to a medium brown upon maturity.

Polystachya foliosa

This orchid is relatively uncommon on Saba and may be found growing in limited locations as a lithophyte (growing on rock faces). Originally from Africa, its location on Saba is likely due to distribution of the seed on hurricane winds. It may be found in various lighting conditions from medium shade to full sun exposure. Its most common occurrences are between the elevations of 900 to 1500 feet on the northerly side of the island, with primary populations observed along the headland area of the Sandy Cruz trail.

Flowering with a large quantity of blooms at a time, and at all times of the year, color ranges from white to a very pale yellow. Blooms last for a very short period and produce large quantities of seed pods as this orchid is self pollinating. Flowers are about 1/2 inch in length with the seedpods being slightly smaller. *P. foliosa* is often found with both flowers and seedpods at the same time. Maturation of the seedpod is between six to ten days, pods changing from bright green to a medium brown upon maturity.

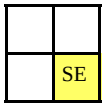
Epidendrum difforme



This orchid may be found on the southeastern area of the island growing between 700 to 1200 feet AMSL. It is most commonly found growing as a lithophyte (on rock faces) facing to the south or southeast. Plants are generally small and tightly attached to cliff faces in small population clumps. The flowers appear in early winter between January and April. Bloom size is about 1/2 inch with a large lip that is almost the size of the entire flower (hence the name *difforme*, meaning deformed). The pale green color of the flower is accented by a darker green anther cap. Numerous blooms are presented sequentially as the flowers begin their display.

Several of the bee species on Saba pollinate this orchid, particularly the *Eoglossa* types that are often mistaken for small flies. The flower has a mildly spicy aroma during the early morning hours when most pollination occurs. By noon no odor is detectable and pollination activities cease. Once pollinated the flower wilts and a small seedpod forms that is less than 1/2 inch in length and 1/4 inch in diameter. Maturation of the seedpod is approximately 75 days.

Jaquiniella globosa

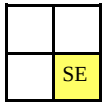


Photograph courtesy of Jay Pfhal and Orchidspecies.com

This orchid may be found in limited locations on the southeast side of the island growing in leaf litter and dead fern residue inside cliff pockets. It is an extremely small orchid with flowers that are barely 1/8 inch in size. The terrate growth allows this plant to survive the dry spells associated with its growing location.

Seedpods have not been observed on any of the plants to date, suggesting that no pollinator is on the island for this species and the limited number of plants are probably vegetative clones from a founding parent.

Psychilis correllii



This rare orchid may be found growing on the southwest corner of the island on the cliff faces just above the gas station as a lithophyte (growing of rock faces) at 100 feet AMSL. The current population faces west resulting in a mostly shaded exposure throughout the day, receiving only late afternoon indirect sunlight for about 2 hours prior to sunset. Flower size of P. correllii is about 1 1/2" in both directions. An additional population growing at about 800 feet AMSL is located on the southeast side of the island in a generally inaccessible location.

Flowering occurs at any time of year on long inflorescences that will rebloom for several years by adding new bud stem growth. Generally, blooming occurs in succession, with groups of five flowers per inflorescence.

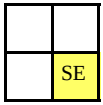
Saba may be the last natural location of this endangered species. Once located on Nevis/St. Kitts, St. Eustatia and St. Maarten/St. Martin, the orchid has been eliminated on these other islands due to loss of habitat. The natural pollinator has yet to be determined although a determination may not be of significance. Hand pollination of the local populations resulted in sterile seed, indicating that genetic out-crossing to a different population is required for seed propagation. If Saba's population is the last one this orchid is seriously threatened with extinction.

Ponthieva racemosa

This orchid, first located by Tom van't Hof of Ecolodge Rendez-Vous and Jan Faber, is relatively uncommon on Saba and may be found growing in limited locations as a terrestrial. It may be found in a variety of lighting conditions from medium shade to full sun exposure. Its most common occurrences are between the elevations of 900 to 1400 feet for locations on Saba.

The small size of the plant and flowers (about 3/4 inches both ways) make this an easy plant to miss even when in bloom. Known in some locations at 'hairy shadow witch.'

Epidendrum secundum



Found growing in numerous locations on the southerly side of the island. Three color forms are found on Saba with the red form predominate, followed by the yellow form and then a violet form being relatively uncommon.

Grows primarily as a lithophyte although some semi-terrestrial and epiphyte growth forms occur.

Dilomilis montana

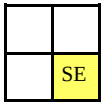
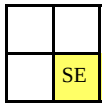


Photo courtesy of Carol Gracie and the New York Botanical Garden

The *Dilomilis* genus consists of only four species and closely resembles the reed stem *Epidendrum* in growth habit. It occurs throughout the Caribbean growing as either a terrestrial or an epiphyte. On Saba it may be found in the relatively open areas of the Sandy Cruz and Maskhorne Hill trails. The fragrant flowers occur between August and November, either as a single bloom or in sequentially blooming racemes. They may be distinguished from the *Epidendrum* genus by the differences in the lip. Whereas the *Epidendrum* has the lip attached to the length of the column, *Dilomilis* lip is free of the column. Although little is known of its reproductive biology it is of taxonomic interest as possibly the earliest of the subtribe that includes *Cattleya*, *Laelia*, *Epidendum* and *Encyclia*.

Triphora surinamensis



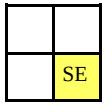
Triphora surinamensis
Seed pods

Photos courtesy of Carol Gracie and the New York Botanical Garden

Triphora surinamensis
Flower

T. surinamensis is an extremely rare orchid from Suriname. Its location on Saba is only the second reported occurrence outside of Suriname. It is a very small (7cm) terrestrial orchid that is *cleistogamic* (flower never opens) and is self-pollinating. The short lived bloom occurs during July and August, lasting no more than three days before seed pod formation begins. Seedpods mature in approximately four weeks, after which the plant is almost indistinguishable in the landscape.

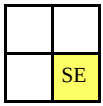
Epidendrum pallidiforum



Found in very limited locations on Saba, usually in areas of dense shade, *E. pallidiforum* is striking in its appearance when in bloom. Its occurrence on Saba is the most northern location reported for its range. It blooms from July through September with a single bloom and is mildly fragrant during the day. Although its pollinator is unknown at the current time, it is likely day pollinated based on the fragrance cycle.

Photo courtesy of Carol Gracie and the New York Botanical Garden

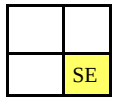
Epidendrum nocturnum



Photograph courtesy of Jay Pfhal and Orchidspecies.com

E. nocturum is found growing as both an epiphyte and lithophyte on Saba. It is similar in flower appearance to *C. ciliaris* with a different lip that is shaped somewhat like the head of a spear. The plant is also different, being one of the reed stem *Epidendrum* types. It is very fragrant at night and is often self pollinating. If the flowers fully open then it is often sphinx moth pollinated. Seed pods are barrel shaped with a tapered end, being about 2 inches long and 1 inch in diameter. Flowering may occur at any time of year although the primary bloom period is during the winter months during the dry season. Pods require about two to three months to mature, depending on the amount of rain occurrence. *Epidendrum nocturnum* is the type species for the *Epidendrum* genus and, although endangered in natural habitat, it is one of the most commonly occurring *Epidendrum* in commercial cultivation. It is often used in creating hybrids with other related orchid species.

Tolumnia prionochilia



Found on a single location in English Quarter, *T. prionochilia* reproduces by stolonic growth (similar to strawberry) if the plant fails to be pollinated.

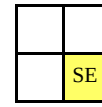
The pollinator has yet to be identified for this species.

Plants are small, being less than 3 inches tall and wide, when mature. Flowering stem reaches to a height of 8 – 10 inches.

"To see a world in a grain of sand, and a heaven in a wild flower;
Hold infinity in the palm of your hand, and eternity in a hour"

William Blake, *Auguries of Innocence*

Maxillaria fulgens



Found growing on the south faces of the island between 900 to 1200 feet elevation. This is one of the transitional zone orchids between the cloud forest area and the montane forest.

The flowers are extremely small being only about 1/8"- 1/4" in size.

Pollinated by Euglosine bees (orchid bees) during the morning hours

Very lightly scented with a mild trace of spice.

Special Thanks from the Editor for their help with this issue to Stewart Chipka; Chris Johnson (**Saba Government Commissioner**;) and Glenn Holm (**Saba Director of Tourism**)

MY PHALAENOPSIS ...
AND THE ATTACK OF THE SCALE INSECTS!

Visiting friends gave me a present of a *Phalaenopsis*, which was the last sorry specimen in the only flower shop they passed by. It flowered a while and then went into a dormant state.

To give the orchid the best chance I asked a friend to take it and let it live in her conservatory. I live in a small cottage with single glazed windows and not much light so conditions are not really suitable for a "warm" orchid.

On one of my visits to my friend's place I noticed that the *Phalaenopsis* was covered in strange looking dark brown, bumpy spots. They could only be removed by scraping them off.

I decided to take the plant home with me and began to investigate.

I soon learned that they were scale insects. There are many different types but all are quite hard to get rid off.

I researched several websites and all agreed that scraping off the shields is the worst you could do. Apparently the "mother shield" harbours the tiniest "children", which are set free when the shield is lifted and crawl out to infest the plant even faster.

The insects are mostly on the underside of the leaf where they are not immediately detected, but also like to hide under the dry husks around the bulbs. My poor plant was covered all over even all the way up the flower spikes.

Basically two non-chemical versions for removal were recommended; one gentler, not so severe on the plant and another more aggressive one. I decided to try out the gentler method.

First, I isolated my infected orchid and paid close attention to any neighbouring plants for the next few weeks, to see if they showed any scale insect infestation.

Then, as recommended, I mixed 1ltr water with 2 TBS olive oil and a squirt of washing-up-liquid.

I sprayed this emulsion on to the infected orchid; to reach into the stipules I used a small, soft brush to apply the mixture.

I repeated this procedure once a week for three weeks.

After the first week I noticed that the scales were falling off and I gently removed the loose scales. After four weeks the orchid was clean and I inspected every possible hiding place and cleaned off the remaining dead scales.

The leaves looked a bit battered in places where the insects had sucked the sap from the veins but I think I was lucky and all in all the *Phalaenopsis* seemed to have survived..

I brought it back home and amazingly after about six months it began to grow a flower spike.

I was delighted.

The more aggressive method involves:

15gms soft-soap, 10ml methylated spirit/alcohol diluted in 1ltr of warm water. Apply for three weeks.

A lot of soft or thin leaved orchids react sensitive to this stronger potion. That is the reason why it should never be sprayed on but only brushed on. It is best to try it out on one leaf first to see if the orchid can handle it.

Tea tree oil (*Melaleuca alternifolia)* may also be effective when dabbed on the infected parts with a cotton bud.

Pesticides that work on contact are not very effective since they do not penetrate the shield.

I hope all your orchids stay healthy and never get attacked by these little nasties!

PETRA JANSSEN

IRISH ORCHID SOCIETY FIELD TRIP
THE BURREN, CO. CLARE

"The sun shone on the righteous" as we met at the pier in Ballyvaughan on Sunday morning. I.O.S. members and visitors from Kew Gardens, the U.K. and Germany, were greeted by our Chairman, Brendan Sayers who, accompanied by Vincent Sex, had "sussed out" the locations on the previous day.

The convoy set off for our first encounter about two miles outside Ballyvaughan on the Lisdoonvarna road. Here we observed *Orchis mascula*, the Early Purple Orchid, for the first time this season. It was also our first chance to use **Ireland's Wild Orchids - a field guide** (Brendan Sayers and Susan Sex, 2008. Available from IOS,) which lived up to expectations making it easy to identify this plant with its upturned spur and mostly unmarked leaves. We saw three colours,
purple, red and pink within the normal range and also the albino form which to me seemed the purest white.

Moving on to the shores of Lough Gealain, we identified *Dactylorhiza incarnata* subsp. *cruenta*, the Flecked Marsh Orchid. This is a robust plant which was flowering approximately two weeks earlier than usual. Quite rare, this plant is only known from Clare, Galway and Mayo. Leaves and bracts are strongly spotted. The flowers are a deep reddish purple.

Also at this site we saw *Neotinea maculata* at its most northerly outpost. This was my first encounter with this plant, the Dense-flowered Orchid and one can see the derivation of its common name. It certainly has a very densely packed inflorescence. Individual flowers are very small. The initial reaction is that they are unopened but on closer observation, the lips protrude which is the only indication that the flowers are open. The plant is small and easy to overlook. One needs to tread softly. It seems that this self-pollinating plant can go over in one day. How privileged we are to be able to admire and note it so far from its Mediterranean origins.

Our 3rd site was on the Rock Forest road. Here we saw *Orchis mascula* again including its albino form, and *Neotinea maculata*.Also visible here was *Neottia ov*ata - the Common Twayblade. This plant is only beginning its long flowering period and members who return in late May, June, even July will encounter it all over the Burren. Its strong leaf combination makes it obvious but another few weeks are necessary for full flowering.

All around us grew the Spring Gentian, the Turlough Violet, the Dwarf Blackthorn, Mountain Avens, Shrubby Cinquefoil, Bloody Cranesbill, Bird's Foot Trefoil and Cowslips. Larks sang in the clear air. The Cuckoo could be heard in the distance.

What a magical place is The Burren in May. I was very glad I made the journey. ♦

MARY BRADSHAW

The Burren (Irish: *Boireann*, meaning "great rock", is a karst-landscape region in northwest County Clare, in Ireland. It is one of the largest karst landscapes in Europe. The region measures approximately 250 square kilometres and is enclosed roughly within the circle made by the villages Ballyvaughan, Kinvara, Tubber, Corofin, Kilfenora and Lisdoonvarna. It is bounded by the Atlantic and Galway Bay on the west and north, respectively.

The "roundworms" or "nematodes" (phylum *Nematoda*) are the most diverse phylum of pseudocoelomates, and one of the most diverse of all animals. Nematode species are very difficult to distinguish; over 80,000 have been described, of which over 15,000 are parasitic. It has been estimated that the total number of described and undescribed roundworms might be more than 500,000.

Nematodes have successfully adapted to nearly every ecological niche from marine to fresh water, from the polar regions to the tropics, as well as the highest to the lowest of elevations. They are ubiquitous in freshwater, marine, and terrestrial environments, where they often outnumber other animals in both individual and species counts, and are found in the locations as diverse as Antarctica and oceanic trenches. They represent, for example, 90% of all life on the seafloor of the Earth. The many parasitic forms include pathogens in most plants and animals (including humans.)

CALENDAR OF EVENTS

July 11 - Saturday Noon
Fieldtrip to Sligo
Mullaghmore, Co. Sligo

The schedule for this year's main fieldtrip is to meet at Mullaghmore, Co. Sligo, as usual, on Saturday July 11. Visiting members and guests can meet at the pier in Mullaghmore, just opposite Lomax's boatyard, an noon.

This is an informal fieldtrip; refreshments and chat make up a large part of the day. Be sure to bring suitable walking footwear and rainproof jackets.

September 7 - Monday 8pm
Members Night
National Botanic Gardens, Glasnevin

Members are invited to have a relaxed evening catching up with each others summer adventures and of course bring plants along to show. The Chairman will give some of his proposals for the year ahead and listen to suggestions.

October 5 - Monday 8pm
My name is Shane and I'm an Orchaholic
National Botanic Gardens, Glasnevin

Shane Kerr will give a presentation offering his advice, opinions and confessions on his 25-year struggle with orchid addiction lavished with many photographs from his plant collection.

IRISH ORCHID SOCIETY
www.irishorchidsociety.org
•
POLLINIA
www.pollinia.org

ORCHIDS AND WILD FLOWERS – AN INTRODUCTORY WALK AND TALK
The Organic Centre in Rossinver, Co Leitrim - Course
Date: 19 July 2009
Instructor: Trudy Lomax—Member IOS

It is impossible to separate wild orchids from the other wild flowers, grasses and ferns that grow alongside them, the insects that pollinate them, the type of ground they grow in, so beware! When you start with wild orchids, you are embarking on a lifelong voyage of discovery.

Trudy Lomax inherited a love of wild flowers from her grandmother, and this led her to write an article on the Wild Orchids of Mullaghmore in Co. Sligo, published in **Wild Ireland.** Since then the **Irish Orchid Society** come to Mullaghmore every year as part of their annual Field trip.

Limited. Please telephone The Organic Centre (071) 98-54338
or email info@theorganiccentre.ie

Trudy emailed the Editor recently: "This looks like being a brilliant season for orchids, I have never seen so many butterfly orchids, early marsh and pyramidal. Bee orchids are popping up everywhere too, so I am positively dizzy with orchids! "

A rather humorous news item came up online today regarding President Obama and the temperature that he keeps the Oval Office. It appears he likes it "hot" – so hot, in fact, that according to Presidential senior advisor, David Axelrod, "You could grow orchids in there."