Nollaig Shona agus Athbhliain faoi Mhaise Daoibh

POLLINIA

Tachycineta bicolor nidus

NEWSLETTER OF THE IRISH ORCHID SOCIETY

Cumann Magairlíní na hÉireann

Volume 12, Issue 2 An Geimhreadh January 2014

THE IRISH ORCHID SOCIETY COMMITTEE

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Secretary: Marie Hourigan
Committee:
Editor: Laurence T. May
Marina Andreeva
Úna Breathnach
Lisa Coffey

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 "fine flour, dust."

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

EDITORIAL INFORMATION

The Editorial Staff reserve 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 Editorial Staff or the Irish Orchid Society.

Contributions of articles, photos or comments may be sent by email to: ***editor@pollinia.org*** or by post to:
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Copies of this and previous issues are available at: ***http://www.pollinia.org***

Cumann Magairlíní na hÉireann

CALENDAR OF EVENTS:

Please note the change of meeting times.
From February 2014 all meetings will be held at the later time of 8pm.

JAN 1 2014
January 2014
There is no Meeting in January
Athbhliain faoi mhaise dhaoibh

FEB 3 2014
February 3th 8pm
Potting demonstration

FEB 22 2014
February 22nd 11:30am
Brendan Sayers, orchid specialist, demonstration of potting.
(Please see Page 4)

FEB 22 2014
February 22nd 2:30pm
Andre Schuiteman, Orchid Taxonomist, The Royal Botanic Gardens, Kew, will speak in the auditorium. (Please see Page 4)

MAR 3 2014
March 2014
There is no Meeting in March
17 Mar St. Patrick's Day

APR 7 2014
April 7th 8:00pm
Guest Speaker

APR 26-27 2014
Dublin Orchid Fair - 10am-5pm
(Please see page 31)

JUN 9 2014
Irish Orchid Society Annual General Meeting
8:00pm

January 2014

Su	M	Tu	W	Th	Fri	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

February 2014

Su	M	Tu	W	Th	Fri	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

March 2014

Su	Mo	Tu	W	Th	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

AN ORCHID WORKSHOP

Saturday, 22nd February

Brendan Sayers, Glasshouse Foreman at the NBG and well-known orchid specialist will give a demonstration on growing and re-potting orchids. This demonstration is open to the public but numbers must be limited.

Please contact Irish Orchid Society Secretary Marie Hourigan to reserve your place: ***info@irishorchidsociety.org***

Time: **11.30 am**. Meet at the Education and Visitor Centre.

Saturday 22nd February
Andre Schuiteman, Orchid Taxonomist, Kew Gardens, will speak in the auditorium.

Andre Schuiteman is Senior Researcher in Orchidaceae at the Royal Botanic Gardens Herbarium, Kew and formerly with the National Herbarium of the Netherlands at Leiden. He is the author of **A Guide to the Dendrobium of New Guinea**. He will speak about some of the 900 species of Dendrobium from India, Southeast Asia and parts of the southern hemisphere.

Time: **2: 30 pm**. This event is free and open to the public.
(***Sponsored by the Irish Orchid Society***)

Please note that these events are scheduled for a Saturday to allow members from further afield to attend.

The Committee is expecting an exceptionally large attendance.

MARY BRADSHAW
TREASURER

DENDROBIUM is a huge genus of orchids. It was established by Olof Swartz in 1799 and today contains about 1,200 species. The genus occurs in diverse habitats throughout much of south, east and southeast Asia, including the Philippines, Borneo, Australia, New Guinea, Vietnam, Solomon Islands and New Zealand.

The name is from the Greek *dendron* ("tree") and *bios* ("life"); it means "one who lives on trees", or, essentially, "epiphyte".

A GUIDE TO DENDROBIUM OF NEW GUINEA.
André Schuiteman,
2013.illus. VI, 122 p. gr8vo. Paper
ISBN-13: 978-9838121408

At present, about 560 species of Dendrobium, over a third of all the species in the genus, have been reported from New Guinea. In this book, a selection of 82 species are shown, carefully chosen to represent the diversity of the genus in New Guinea, at the same time including some of the most common, unusual, or showy species.

Species of the genus Dendrobium are among the most conspicuous and attractive orchids to be found in New Guinea, or anywhere else for that matter. About 560 species have been recorded from this great island, of which many are still poorly known. In this book a selection of 80 species are shown, carefully chosen to display the diversity of the genus, at the same time highlighting some of its most commonly encountered, beautiful or unusual representatives. Many of the excellent photographs were taken in the wild, which is where most of the species are observed to their best advantage. This is especially true for high altitude species such as *D. dekockii* and *D. crenatifolium*, which are virtually never seen outside their native habitat as they are extremely difficult to keep in cultivation.

As a result of DNA analyses, the classification of Dendrobium and related genera has undergone considerable modifications in recent years. The classification in this book takes these into account. There is an identification key to the sections of the genus, and a checklist enumerating all known species arranged according to section.

Dendrobium-x-delicatum

How Orchids Got So Cheap

Taiwan has refined the breeding of orchids into a mass-production business. Most growers handle one step in the process, such as cloning orchids through tissue culture.

HOW ORCHIDS GOT SO CHEAP

Taiwan's Efficient Growers, Who Copied Tech Industry, Bemoan Days When a Flower Fetched €75,000

WUSHU VILLAGE, Taiwan—A custard-yellow orchid dubbed P. Golden Emperor 'Sweet' changed hands between Taiwan breeders in 1978 for €75,000.

Now, orchids roll out of greenhouses in Taiwan and onto the shelves of retailers like Lowe's for as little as €4.

As with flat-panel TVs and laptops, the once-rare orchid has become a mass-market commodity. Orchids now are the best-selling potted flower in the US, with annual sales exceeding the poinsettia, according to the US Department of Agriculture.

Behind the shift are the entrepreneurs of Taiwan, who have brought to orchid-breeding the energy and methods applied to making consumer electronics.

One result is familiar to many electronics makers: While global orchid sales are rising, profit margins are thinning.

"An orchid is no longer worth what it used to be," said Wu Po-Hung, one of Tainan's largest orchid growers.

"We learned how to grow them too well."

Greenhouses rise from the humid plains of southern Tainan County in clusters that bring together dozens of small growers. Each specializes in a specific stage of the production cycle—from germination to potting plants.

Together they form an intricate orchid-production chain that can produce orchids to meet client specifications. Its efficiency resembles the assembly lines of Hon Hai Precision Industry Co., the Taiwanese contractor that makes iPhones and other Apple Inc. products.

Small orchids in containers sit on shelves of a tissue-culture room at an orchid farm owned by Wu Po-Hung in Tainan, Taiwan

Overall, since the US first permitted imports of Taiwanese potted orchids in 2004, the wholesale value of a large potted orchid in the US has dropped around 30%, with inflation factored in, according to figures from the US Department of Agriculture. Smaller orchid plants now wholesale for as little as 100 New Taiwan dollars (€2.50.) It is a reversal for Mr. Wu, whose family originally grew orchids on their rooftop as a hobby. His father turned it into a business after discovering he could make more money selling collectors the orchids on weekends than in his day job as an airplane mechanic.

A market for rare orchids still exists. But that has been on decline since the mid-20th century when horticulturalists figured out how to clone orchids from tissue cells.

For centuries prior, growing orchids was something of a mystery. Their dust-like seeds would sprout only if they landed on particular types of fungus. They grew best clinging to trees or rocks, instead of dirt, in the jungles of Southeast Asia and South America.

The ancient Greeks saw the orchid as the incarnation of a nymph's lustful son who had tried to rape a priestess. In Victorian Europe, orchid hunters hired by wealthy collectors sometimes killed each other in pursuit of new breeds—the subject of Susan Orlean's 1998 book on orchid history, "The Orchid Thief." Disliking its often

Orchid greenhouses often bring together dozens of small growers, each specializing in a specific stage of the production cycle. While generally it takes one to two years to grow an orchid, 'most Taiwanese orchid growers keep the plants for only a six-month segment,' says Mr. Wu

ostentatious collectors, American author James Agee wrote in 1935 that the orchid was "the Largest, the Loudest, the Most Expensive, the most supercharged with Eroticism, Glamor, Prestige."

The contemporary orchid-breeding business in Taiwan and its main rival, the Netherlands, centers on the Phalaenopsis, or the moth orchid. Native to Taiwan, it is popular with overseas customers for its full petals in pink, purple, white and yellow.

In the 1980s, a government-owned sugar company started growing orchids and found it more profitable than its core business. A decade ago, the Taiwan government plowed under huge swaths of unprofitable sugar cane to build greenhouses for orchids.

Following the tech industry model, the small growers grouped together into production chains.

Some growers focus on new breeds, coaxing cloned orchid cells into tiny green curls floating in glass flasks. Others then raise the slow-growing seedlings, packing them with dry moss into flexible plastic pots.

Since the US first permitted imports of Taiwanese potted orchids in 2004, the wholesale value of a large potted orchid in the US has dropped around 30%, with inflation factored in, according to figures from the US Department of Agriculture. Smaller orchids now wholesale for as little as US$3.33, Mr. Wu says.

Orchids are the best-selling potted flower in the US, with annual sales exceeding poinsettias, the USDA says.

The seedlings go through three growth stages of 4 to 6 months each, usually under the care of different growers, and are repacked each time into successively larger pots. Then they are shipped overseas. At a greenhouse in the US, a shock of cold jolts the plants into flowering. Then they go to the most profitable stage: end-user sales.

The process has allowed Taiwan to become the world's largest producer of orchids by shipment number (the Netherlands is actually the largest producer by revenue) while capturing only a fraction of the profits. It is a ceiling Taiwanese companies have hit repeatedly: from laptop computers to power wheelchairs and golf club heads.

After building its economy on small-scale, low-margin manufacturers and efficient supply chains that revolutionized global pricing for a host of manufactured products, Taiwan has seen most of the profits flow elsewhere. Taiwan President Ma Ying-jeou and other politicians have called repeatedly for "structural reform" to solve the predicament, but have yet to produce solutions.

Workers prepare young plants to be exported. A market for rare orchids exists. But that has been on decline since the mid-20th century when horticulturalists figured out how to clone orchids from tissue cells.

"Taiwan's orchid growers can't do much except keep trying to cut costs lower to stay ahead," said Ting-Fang Hsieh, director of Taiwan's government-run Floriculture Research Center.

Taiwanese growers bemoan that they ship more orchids than the Netherlands, but the Dutch manage to make more money from orchids. A major Dutch competitor, Floricultura BV, has built its own greenhouses in the US, which means it can control the more lucrative sales to retailers.

Though Taiwan has some industrial-scale production, most of the business is dominated by small family-run shops that focus on a single step. That, to some, is sapping profitability.

While generally it takes one to two years to grow an orchid, "most Taiwanese orchid growers keep the plants for only a six-month segment," said Mr. Wu, the Wushu Village grower. The strategy, he says, limits investment risk but also means Taiwanese growers don't control sales overseas.

Some growers are experimenting. Nadison Hsu, the 43-year-old chairman of Taiwan's largest orchid-growing collective and an ex-government official who favors pink and green Hawaiian shirts, said the industry needs to consolidate and innovate to succeed.

Ready for export. Mr. Wu's farm has more than 500 orchid varieties.

His company, Taiwan Orchid Professionals, began selling a brand of orchid-infused beauty products in Asia. It is also selling gold-coated orchids as a gimmick to build the brand. The company became the first horticultural company to list on Taiwan's over-the-counter Gre Tai Securities Market this year, a precursor step to listing on the Taiwan Stock Exchange.

Showing off a large orchid plant with seven spotless white blooms cascading down a central stem, Mr. Hsu pointed to the four pairs of leathery green leaves, which show that the plant had taken four years to reach that size.

"How much do you think we can sell this for?" he says. "Just 250 New Taiwan dollars" - €6.25. ■

EVA DOU
WALL STREET JOURNAL

21ST WORLD ORCHID CONFERENCE
10 – 13 September 2014
Johannesburg, South Africa
http://www.woc21.org/

THE STRUCTURE AND FUNCTION OF ORCHID POLLINARIA

Cohesive masses of pollen known as pollinia have evolved independently in two plant families — Orchidaceae and Asclepiadaceae. Yet, the bilateral symmetry of orchids has allowed a greater degree of specialization in pollination systems and a much greater diversity in the morphology of pollinaria — units comprising the pollinia(um) together with accessory structures for attachment to the pollinator.

Pollinaria differ in the degree of cohesion of pollen in the pollinium, which may be soft, sectile (comprised of sub-units known as massulae) or hard. A single hard pollinium may contain more than a million pollen grains, yet pollen:ovule ratios in orchids are several orders of magnitude lower than in plants with powdery pollen due to the lack of wastage during transport to the stigma. Attachment of pollinia to the pollinator is usually achieved by means of a viscidium that adheres most effectively to smooth surfaces, such as the eyes and mouthparts of insects and beaks of birds.

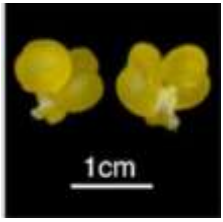
The stalk connecting a pollinium to the viscidium may be comprised of a caudicle (sporogenous in origin) and/or a stipe (derived from vegetative tissue), or be lacking altogether. Caudicles and stipes may undergo a gradual bending movement 20 s to several hours after withdrawal from the flower, the main function of which appears to be to reduce the possibility of geitonogamous pollination. Other mechanisms that promote outcrossing and pollen export in orchids include pollen carryover (achieved by sectile or soft pollinia), temporary retention of the anther cap, protandry and self-incompatibility (rare among orchids).

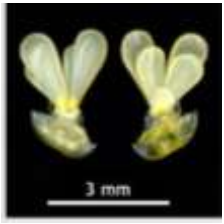
Pollinaria ensure that large pollen loads are deposited on the stigma, thus enabling the fertilization of the large numbers of ovules in the flowers of Orchidaceae.

Pollinaria also ensure efficient removal of pollen from the anther, minimal pollen wastage during transit, and a high probability of deposition on conspecific stigmas.

S. D. JOHNSON, T. J. EDWARDS

Plant Systematics and Evolution
Volume 222, Issue 1-4, pp 243-269





HERMAPHRODITIC ORCHID

Scientists have discovered an orchid that never needs to get a date—it can fertilize itself by performing a sexual act never before seen in flowers.

The hermaphroditic orchid shuns the sexual practices of other flowers and completes the deed without the help of sticky liquids, birds or even a breath of wind, a new study reveals.

Many flowers rely on insects or birds, which they attract with sweet scent or tasty nectar, to help with fertilization. The hungry animals brush against the pollen-producing male bits (anther) of one plant and transfer it to the opening of a neighboring flower's female reproductive organs (stigma). Wind can also help this process along, although it's not as direct.

One orchid, *Holcoglossum amesianum*, performs a tricky, 360-degree, gravity-defying dance to pollinate itself. Here's how it works:

First, the cap covering the male anther pops off, uncovering two pollen-holding pollinia attached to a flexible rod called a stipe. The stipe rises up before curving forward and downwards past the edge of the rostellum, a structure that separates the male and female parts of the orchid. Finally, the stipe curves back up and around the rostellum and inserts the pollinia into the stigma cavity.

While most flowers spread their pollen to other plants, the new orchid is extremely exclusive and only mates with itself. The self-pollination act was also successful in flower terms, producing fruit about 50 percent of the time.

Of the 1,911 *H. amesianum* orchids the scientists observed growing on tree trunks in Simao, Yunnan, China, all used the same self-pollination strategy. This method of self-pollination, which comes in handy when winds are gentle or insects are lacking, adds to the variety of mechanisms flowering plants have evolved to ensure success.

Holcoglossum amesianum

ENDANGERED PLANTS FOR SALE ONLINE: ARE THEY LEGAL?

Did you know that it is often legal to buy and sell endangered species of plants through the mail? It's true. Take, for example, the rare Hawaiian palm tree *Pritchardia remota*, one of several species collectively known as lou'lu. The tree, like many in its genus, is listed as endangered under the US Endangered Species Act (ESA), but right now there are several for sale on eBay. If those sellers have the right permit, then their sales are both legal and within the goals and scopes of the Endangered Species Act. Unfortunately, new research finds that the commercial trade of endangered plant species rarely lives up to law.

Plant sales and private cultivation are actually encouraged under the ESA, which recognizes that commercial propagation is often essential to the survival of listed species. Individuals can collect endangered plants from the wild (as long as they don't do it from federal land), raise them and sell either whole plants or seeds. The ESA does have one requirement: sellers must apply for a $100 permit from the US Fish and Wildlife Service (FWS) if plants are sold across state lines.

But the first in-depth study of online plant sales has found that many if not most sellers appear to lack this essential permit. The study—conducted by researchers at University of Notre Dame and published May 28 in Conservation Letters—found 49 federally listed plant species for sale on the Internet on eBay and other sites. The researchers, who conducted their searches between October 2009 and January 2011, then compared the listings with permit notices published in the Federal Register. They found that only four sellers, two of which were conservation organizations, had obtained the necessary interstate commerce permits. The remaining sellers all appeared to lack the permit.

Lead researcher Patrick Shirey, a Ph.D. candidate at Notre Dame's Department of Biological Sciences, first observed this phenomenon while working on an earlier paper about human-assisted colonization of threatened plants under the ESA, which was published in Conservation Letters in December 2009. When researching that paper, he says, "we noticed that the sellers of Tennessee coneflower and Virginia roundleaf birch didn't advertise the required permit when offering plants for sale. We wanted to know if commercial trade was common for other listed plants."

The researchers studied hundreds of plant species, including 753 on the ESA and dozens more that are protected by the Convention on International Trade in Endangered Species (CITES). While many of the plants offered for sale were obviously from cultivated populations, they did observe many species that have been threatened by over-collecting from wild populations. They did not track actual completed financial transactions, only plants offered for sale, nor did they look at sales that did not cross state borders, which would not have required the ESA permit. (Each state has its own laws regarding what plants can and can't be sold within its borders.)

Shirey and his researchers wrote that collaboration between federal agencies, nurseries and individual plant collectors could help to preserve rare species, but it may require more regulation than exists today. "I would like to see more collaboration between public and private interests for the benefit of these endangered species," Shirey says. He points to Australia's critically endangered Wollemi pine (*Wollemia nobilis*) as a good example. The tree has fewer than 100 individuals left in the wild, but botanical gardens have propagated it worldwide, and some of the money raised from selling the plants goes into conserving the wild population. A similar program could work, he suggests, with the ESA-listed star cactus (*Astrophytum asterias*). "Sales of cultivated star cactus are common" — with and without FWS permits — "but profits do not support wild populations like the sales of Wollemi pine." Meanwhile, the federal government spent more than $64,000 in fiscal year 2011 to study and protect the star cactus in the wild.

Shirey and his fellow researchers indicate that private cultivation of endangered plants does more good than harm, and he points out that buyers who are aware of this issue should be able to tell if an online seller has the correct permit. "The few sellers that have the permit advertise on their website or with the listing that they do so. For example, Sunlight Gardens sells the threatened Cumberland rosemary (*Conradina verticillata*), and they give their FWS permit number with the listing. They also send a photocopy of their FWS permit with their order."

Gavin Shire, public affairs specialist with FWS, told me how important individuals are to plant conservation. "Some 75 percent of endangered and threatened plant species occur to some extent on private lands, and so their conservation can be significantly affected by activities in those habitats. Private landowners and other citizens can have a positive impact on rare plant conservation, and we encourage them to contact their local Fish and Wildlife Service office, and their State Natural Heritage Program to learn more about what they can do to help."

As for the sellers operating without permits, they might want to think about spending that $100 to get their affairs in order. Anyone convicted of selling endangered plants without the right permits could face a maximum of one year in prison and a $100,000 fine.

Oh, and by the way, I asked one of the eBay sellers currently selling *P. remota* plants if they had the FWS permit. I still await a reply.

JOHN R. PLATT
SCIENTIFIC AMERICAN

DACTYLORHIZA FUCHSII

Common Name:	**Common spotted-orchid**
Scientific Name:	***Dactylorhiza fuchsii***
Irish Name:	***Nuacht bhallach***

One of the Spotted-orchids which are extremely variable, this perennial is found in marshes, fens, calcareous or neutral soils, roadsides and meadows. It stands about 50 –60cm high, (20" to 24") bearing its amazingly designed flowers in an open spike.

Each flower has a distinctive trident-shaped lip with the central lobe being longer than those on either side. Sepals and petals create a hood over this, the pollinating insects' landing-pad. The large lip has a variety of spots, squiggles, flecks, streaks and dots. In bloom from May to August, these flowers can vary in colour from hues of palest pink to shades of purple. The flowers have slender spurs which taper and point downward. The lower leaves are narrow, lanceolate and usually spotted with smaller leaves clinging further up the stem. This is a native plant and it belongs to the Orchidaceae family.

I first spotted this Orchid in 1978 at 5-mile point in County Wicklow and I photographed it in the Burren, County Clare in 2009.

This is one of the most variable of our seven Spotted-Orchids and much inclined to hybridisation with other Dactylorhiza species. If ever there was a wildflower crying out to be seen through a hand lens, this must be it. ■

Zoë Devlin is a regular columnist for **Pollinia** on wild Irish orchids.

Zoë's website is "Wildflowers of Ireland" - ***http://www.wildflowersofireland.net/***

Her book '**Wildflowers of Ireland - A Personal Record**' is published by the Collins Press, Cork.

AN ORCHID DISGUISED AS A WEED

For those of us old enough to remember giving or receiving an orchid corsage, the concept of a "weed orchid" seems odd. First discovered in 1879 near Syracuse, New York, the helleborine (*Epipactis helleborine*) was first thought to be a new species of North American orchid. This caused quite a stir among 19th-century botanists and orchid enthusiasts, but the plant was later identified as a Eurasian native with a history dating to mid-16th-century herbal lore as a cure for gout.

We will probably never know if the plant was intentionally brought to North America, or if its seeds were hitchhikers on some transplanted Eurasian ornamental. What remains true is how well adapted it is to its new habitat.

Considering the rarity of our native orchids, and the near impossible task of transplanting them to gardens, it seems incredible that helleborine has become so well established. Quite simply, unlike our native orchids, this plant is happy with a wide range of soil conditions. It is also undaunted by some of the East's most aggressive plants, like English ivy or pachysandra; it frequently grows through dense beds of these plants. I have even seen it perform one of the incredible feats of urban plant-world mythology, as it pushed its way through asphalt, a feat generally ascribed to bamboo or phragmites. It is truly a weed orchid.

In just a little over a hundred years, *E. helleborine* has spread from Atlantic Coast to Pacific Coast and almost all points between.

About 20 years ago, I was serving my first day of jury duty in Kew Gardens, Queens, when the judge cheerily announced that a witness for the defense was late. Could the jury come back in five hours? At 10 o'clock in the morning I headed out to wander the enclave of colonial- and Tudor-style homes, with their old trees, privet hedges, trimmed lawns and winding roads, with legally sanctioned time in hand. Though my

first orchid of the day was a variegated Chinese Cymbidium growing in the window of a sushi restaurant, it was not long before I discovered helleborine growing everywhere.

I now make this visit annually. This year, helleborine was particularly thick on Austin Street at 81st Avenue. It still sprouts from patios, rock walls, driveways, tree pits, mowed lawns, unmown lawns, privet hedges and hosta beds on 82nd Avenue, on Lefferts Boulevard and alongside slate-rock stairways on Grenfell Street, yards from the Long Island Railroad. As a weed, helleborine proudly holds its head up with dandelions, dayflowers, horseweed, mugwort, plantains and smartweeds, but helleborine is an orchid, whose modified lip and floral structures are as tropical looking as any orchid growing in the Brooklyn Botanic Garden or the New York Botanical Garden in the Bronx. Helleborine can also commonly be seen in Manhattan (Battery Park City is a good place to start, as is Central Park). But don't stop there; hundreds of these orchids sprout from sidewalk cracks, curbside grassy patches, near fire hydrants, under hedges, and in densely planted borders in all five boroughs.

As I recounted my first exhausting day of civil service to my then-girlfriend, I told her about lunch at a great Kew Gardens ale house, a midafternoon revival house movie, and orchids growing in the streets. Her blank stare may have been incredulity, or jealousy, or perhaps a little of each.

DAVE TAFT
NEW YORK TIMES

COMPETITION !!
CALLING ALL IOS MEMBERS.

Your IOS committee is organising a writing competition for POLLINIA. Members are requested to submit a minimum 250 word article about their experiences with orchids. (photos may be inserted).

Entries will be judged by members of the IOS committee. The best two articles will be published in Pollinia. The successful writers will each receive a €50 voucher to spend at the Orchid Fair in April 2014.

Entries must be received by January 31st 2014, clearly marked as "IOS competition". and sent to :

Marie Hourigan, **Irish Orchid Society**, c/o
National Botanic gardens, Glasnevin, Dublin, 9

MEMBER FOCUS

The Questionnaire included with the mailing of the January 2013 issue of *Pollinia* invited Irish Orchid Society Members to share their orchid growing experiences and orchid interests with other Members.

Peter, from Germany, continues the series, a regular feature in future issues.

Members who have not completed the Questionnaire may continue to send them to: Marie Hourigan, Secretary, Irish Orchid Society, National Botanic Gardens Glasnevin, Dublin 9, Ireland

Peter, your Interest in orchids began why and when?

~ c.a.1985. Garden Book: *My Beautiful Garden*, 4 pages of Paphiopedilum hybrids

What was your first plant?

~ Paphiopedilum

How many plants are in your collection?

~ Maybe 500

Where did you purchase them?

~ Greenhouse Nurseries

Where do you grow them?

~ Greenhouse

What is your favourite orchid species/hybrid/genus?

~ Cattleyas, Laelias, Paphiopedilum, Vanda

How often do you repot plants?

~ Every 2 years

Which type of potting mix do you use?

~ Pine, Styrofoam, coconut

Which group are you most successful with?

~ Cattleyas

Which group do you continually fail with?

~ (Not answered)

Which are the oldest specimens and how old are they?

~ *Schomburgkia thomsoniana*

~ *Do you use insecticides or fungicides? if so which ones*

~ (Not answered)

~ Which fertilisers do you use and do you use tap water or rainwater?

~ Rainwater

~ Which orchid would be your dream plant/group to grow?

~ Cattleyas

Schomburgkia thomsoniana

FRONT COVER:

Tree swallow (Tachycineta bicolor). Nest. Collected from Tatoosh Island, Callam County, Washington, 1995. Cornell University Museum of Vertebrates. These iridescent aerialists nest in cavities of older trees and snags, often those created by woodpeckers. Goose feathers insulate this loose cup of grass and twigs found in one of these natural nesting sites, which have been disappearing over the past 200 years. They will readily occupy nest boxes as substitutes if they are placed near sources of insects, the mainstay of their diet.

For additional images of bird nests please visit:

http://www.flickr.com/photos/planetcitizen/sets/72157604732862637/

RECENTLY IN FLOWER IN THE NATIONAL BOTANIC GARDENS

Lepanthopsis astrophora 'Stalky'
Synonyms *Pleurothallis astrophora* Rchb. f. ex Kraenzl. 1892

Lepanthopsis (leh-pan-THOP-siss) is a genus comprising of around 38 species mostly from the Andes and Caribbean. The name refers to its similarity to Lepanthes as the stems are also ringed by sheaths. Many members of this genus have many small flowers that will bloom simultaneously on the inflorescence while others will at least have several flowers open at the same time.

This particular species *L. astrophora* 'Stalky' is a native of coastal Venezuela and Colombia at elevations of up to 1500 meters. It is miniature orchid requiring temperatures which are intermediate to hot. It is an epiphyte with erect slender ramicauls which are covered by approximately six sheaths, carrying a single erect subacute leaf.

Each flower is about 3/16" [4 mm] and blooms in the fall and spring on a terminal, erect, many flowered, racemose inflorescence. Each inflorescence can have up to six flowers that open simultaneously and are held well above the leaves as is seen in the photos.

When I was trawling through various websites looking at this genus I found one blog where the owner claimed to have a plant that once produced up to 650 flowers on 70 flower spikes. That must have been an impressive sight and something we'd all like to achieve.

It's common name is 'The Star-Bearing Inflorescence' due to it's minute star shaped flowers. This tiny little plant is grown under lock and key in the intermediate nursery orchid house. Unfortunately due to it's tiny size the plant is not on public display. It is watered and fed regularly during the growing season. It is fairly rare and not so easily purchased, I found it online for $26.99 [€20] which isn't cheap either. There are other Lepanthopsis species that are more affordable and possibly a little easier to grow.

MARIE HOURIGAN

In August, I took a trip to Ards, which has extensive areas of grassland and dunes leading down to the estuary. Within the first minute I had found plenty of Chanterelles in the usual place near the car park, and then I glanced up the forest path and immediately recognised the Destroying Angel - *Amanita virosa*.

A. virosa produces the same toxin as the Death Cap; this causes death by multiple organ failure within 72 hours. Something had chewed the right-hand side of the cap, destroying the symmetry of the image, but it will serve its purpose. Growing under Beech.

Many of the expected Ards fungi were not yet obvious, although I did spot a little patch of the exceedingly rare *Phellodon melaleucus* in its usual spot. This has clearly just emerged, and is paler than the long-lived mature caps will be later in the year.

The next part of the foray was through mature mixed woodland, where many of the Conifers have been harvested, leaving plenty of open areas with some logs left behind to enhance the habitat. I spotted several very fresh Russulas at the base of one of the stumps.

I had a great deal of trouble identifying this specimen when taking it through Geoff Kibby's excellent new key, with no decent match turning up. After a couple of days, however, I noticed that the stipe had developed a pink tinge at the base and that led me quite quickly to *Russula velenovskyi*. *Ramaria stricta* was also very fresh-looking.

Waxcaps (*Hygrocybe mucronella*) are usually associated with grassland, but I found quite a few on bare soil under trees.

Phellodon melaleucus

STUART DUNLOP

Hygrocybe mucronella

Ramaria stricta

Russula velenovskyi

DONEGAL WILDLIFE

A regularly updated pictorial narrative of the wildlife around Raphoe, Co. Donegal, Ireland.

Follow Stuart's regular postings about local Donegal wildlife:

http://www.donegal-wildlife.blogspot.com

NESTS: Fifty Nests and the Birds that Built Them

Sharon Beals

Chronicle Books: Hardback 120 pages
ISBN 13: 9780811877589

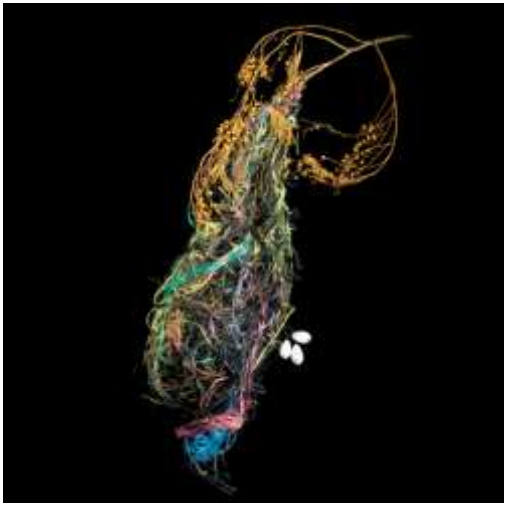
Most people think of a simple round bowl filled with eggs up in a tree when they think of a bird's nest, but not all are the same.

Photographer Sharon Beals set out to catalog these works of art for her book **Nests**. Calling birds 'nature's most fastidious architects,' Ms Beals wanted to share her fascination with structures created 'in all shapes and sizes using a variety of materials.

'There are those that build with mud, burrow tunnels, weave hanging pendulous baskets or cups onto branches, stitch leaves, stack sticks, or glue with saliva. Some just make simple scrapes on the ground, or fill cavities with fur and bones, and others that camouflage their nests with lichen, spider web, or moss,' Beals wrote in her book.

The nests featured in the book are parts of permanent collections at the California Academy of Sciences, the Museum of Vertebrate Zoology at UC Berkeley, and the Western Foundation of Vertebrate Zoology.

Many of the nests pictured were collected prior to 1950, some are over 100-years-old. Nest collecting was made illegal in the Migratory Bird Treaty Act, signed into law in 1918. ▪



Altamira oriole (Icterus gularis). *Collected from Morazón, El Progreso, Guatemala, 2001. Western Foundation of Vertebrate Zoology. Relatives of blackbirds and meadowlarks, altamira orioles can be found from the Rio Grande to Nicaragua, living in year-round territories as lifelong pairs. It can take the female a month to weave a pendulous nest, which is entered from the top, with a nesting chamber at the bottom.*
All photographs © Sharon Beals

Bullocks Oriole (*Icterus bullockii*)

Swainson's Thrush (*Catharus ustulatus*)

Caspian tern (*Hydroprogne caspia*)

Bank swallow (*Riparia riparia*)

Golden-hooded tanager (*Tangara larvata*)

Verdin (*Auriparus flaviceps*)

THE DACTYLORHIZA CONFUSION
Possible causes and approaches.

Following the contribution in the last issue of **Pollinia** by Stuart Dunlop (Vol. 12, Issue 1, October 2013) I am prompted into the following observations on Dactylorhiza and some of the difficulties in their identification.

Most readers of this newsletter are very familiar with the fact that confident identification of native Dactylorhiza is difficult. This is often due to the 'hybrid factor'. When species cross-pollinate with one another they create offspring that combine their distinguishing characters, making decisions on identification difficult. There is no single approach to this problem but the presence of great variability and possible parents in close proximity can bolster the identification of a 'possible hybrid' population.

A second difficulty that arises in identification is the over acceptance of this hybridisation. It can be that when clear identification does not come quickly enough, we choose the option and call 'hybrid'. The variability within species of orchid is contrary to our general view and expectation of what constitutes a species. It is often the case that we expect species to fall into our descriptions giving no recognition to the advances in our understanding of evolution and that it is our concepts that need realignment.

A third difficulty is that certain Irish orchids do not keep to the characters and habitats of their British and European representatives. For as complete as possible an understanding of a species it is necessary to examine how it manifests itself in different parts of its range. Excluding the limited and costly Ireland's Wild Orchids, prior to 2008, interested amateurs had to rely on British and mainland European publications for information on Irish orchids. These publications documented traits and habitats that did not necessarily reflect those of every Irish orchid population. A prime example is one of the orchids that featured in the above-mentioned issue of Pollinia, the Hebridean sub-species of the common spotted-orchid.

In the last issue Stuart Dunlop wrote of an odd, possible hybrid among the otherwise 'pure' population of Northern marsh-orchid in the dunes close to Donegal International Airport. The accompanying image is not of a possible hybrid but *Dactylorhiza fuchsii* subsp. *hebridensis* (Hebridean sub-species of the common spotted-orchid). It is sometimes referred to as the Hebridean spotted-orchid, a more compact name that I will use from now on in this note.

The Hebridean spotted-orchid grows on machair in Scotland and Ireland. Anne and Simon Harrap in ***Orchids of Britain and Ireland*** – a field and site guide say the

Hebridean spotted-orchid is “small and stocky” and that the “spike is often pyramidal or conical and densely packed” and that “the upper stem usually washed purple and the leaves heavily spotted”. Tom Curtis and Robert Thompson agree with that description adding that it is “rarely unspotted”. My own observations of this Hebridean spotted-orchid in Co. Donegal (roadside grassland and Cruit Island population) and Mayo (roadside grassland habitats) shows that spotting can be present but is usually absent. This trait was previously noted by Derek Turner-Ettlinger and has again been noted in Sayers and Sex. In all of the below referenced publications images of Irish plants showing leaves, both painted and photographed, show plants with unspotted leaves.

Less strength is now given to the presence or absence of spotting on the leaves of Dactylorhiza species as an indication of taxonomic rank. However it will be many years before this is reflected in publications that we use to assist us in the field and for reference.

BRENDAN SAYERS

Curtis & Thompson, 2009, *The Orchids of Ireland*, National Museums Northern Ireland, Holywood, Co. Down

Harrap & Harrap, 2005, *Orchids of Britain and Ireland – a field and site guide*, A&C Black Publishing, London

Sayers & Sex, 2008, *Ireland’s Wild Orchids – a field guide*, privately published, Portmarnock, Co. Dublin

Sex & Sayers, 2002, *Ireland’s Wild Orchids*, privately published, Portmarnock, Co. Dublin

Turner-Ettlinger D.M. 1997 *Notes on British and Irish Orchids*, privately published, Dorking, Surrey

Turner-Ettlinger D.M. 1998 *Illustrations of British and Irish Orchids*, privately published, Dorking, Surrey

Dactylorhiza fuchsii* subsp. *hebridensis

NEW ONLINE VIDEO

There is a new Orchid Ark film on endangered orchids made in collaboration with Barry Natusch, Professor in Media Studies, Nihon University, Tokyo:

http://www.youtube.com/watch?v=EhFVv9EdsTk

IRISH ORCHID SOCIETY
www.irishorchidsociety.org

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POLLINIA and *Magairlíní*
www.pollinia.org

Back issues of *Pollinia* are available in PDF format on the website.

April 26th/27th
Orchid Fair. 10am - 5pm.
Free Admission

The 2014 Dublin Orchid Fair

The Annual Orchid Fair organised by the National Botanic Gardens will be held April 26th and 27th in the Teak House at Glasnevin. Burnham Nurseries and Ray Creek will be participating this year and will have a large collection of orchids and sundries for sale over the two days.

Members are reminded to bring along their flowering specimens for display and to enter our traditional 'best in show' competition. All plants must be delivered to the Teak House no later than 2pm on Saturday, 26th April. We shall also hold our very popular raffle during the weekend.
Talks and tours will also be held during the weekend, details of which will be finalised nearer the time.

All those interested in helping out on the stand for the weekend should contact Marie Hourigan at the National Botanic Gardens or email ***info@irishorchidsociety.org***
Times available for both days are 10am-2pm and 2pm to 5pm.

For pre-orders please contact:

http://raycreekorchids.com

http://www.orchids.uk.com/

Orchid Christmas Tree . Daniel Stowe Botanical Garden, Belmont, NC, US

IN THIS ISSUE

ISSN 1649-1173
9 771649 117008