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MESSAGE FROM THE IPPS PRESIDENT

Greetings to IPPS Members!

I am happy to bring you the new issue of Haustorium that has continuously been growing in content and volume, thanks to great efforts of Chris, Lytton, and Harro. In this issue, you will find two important notices for the IPPS events.

As already announced in the last issue, our next major conference, the 13th World Congress on Parasitic Plants, will take place in Kunming, the City of Eternal Spring, at Kunming Dianchi Garden Hotel & Spa, China, from July 5 to 10, 2015. Airong Li at Kunming Institute of Botany, Chinese Academy of Sciences and her colleagues with other Chinese scientists are busy organizing the congress. John Yorder will lead the programmeg committee. We are looking forward to welcoming you in Kunming. Details will be found in the conference website;
http://wcpp13.csp.escience.cn/dct/page/65540

The second notice is the election of the IPPS Executive Committee. According to the schedule confirmed at the last meeting, we are expected to elect half the positions in the Executive Committee; this time, Editor and Treasurer. Details will be sent in a separate mailing. I would like to ask your active participation in this important event in your society.

In Japan, fortunately, we have not yet experienced serious crop losses due to weedy parasitic plants. However, some Japanese companies that have their own crop fields or contract-farmers in areas infested by root parasitic weeds have come to notice the problems caused by these noxious weeds. An example is posted in this issue – *Striga gesnerioides* infection on tobacco in Zambia. I believe that it is important to educate people especially farmers in parasitic weeds free areas and/or regions about potential damages posed by these devastating weeds. This would help reduce, stop, and limit potential infection by parasitic weeds.

Sincerely,

Koichi Yoneyama, IPPS President
yoneyama@cc.utsunomiya-u.ac.jp

13TH WORLD CONGRESS ON PARASITIC PLANTS

The Organizing Committee cordially invites you to the 13th World Congress on Parasitic Plants (WCPP13) to be held from 5-10 July 2015 in Kunming, the City of Eternal Spring, in Southwest of China mainland. Organized by Kunming Institute of Botany (KIB), Chinese Academy of Sciences (CAS) under the auspices of the International Parasitic Plant Society (IPPS), this 6 day event will bring the WCPP legacy to East Asia for the first time.

WCPP13 will continue the long tradition of regularly assembling experts on parasitic plants from all over the world for academic meetings that started in 1973 in Malta. With the theme '**Parasitic plants: the good, the bad, and the mysterious**', this congress seeks to stimulate a productive exchange of information and ideas among researchers from around the world representing a wide spectrum of disciplines and perspectives, but all focused around the common theme of plant parasitism. Conference sessions will be designed to find common interests and to include presentations at the cutting edge of parasitic plants research (concerning both weedy and non-weedy species) and of management technologies of parasitic weeds.

The ultimate objectives of WCPP13 can be summarized as '**Concern, Control, and Collaboration**', and our meeting activities reflect these three elements: 'Concern' in that we hope to raise more concern on currently non-weedy parasitic plants before they become a problem; 'Control' in the activities that are leading to new technologies and applications for a better management of parasitic weeds; and Collaboration, the hallmark of WCPP13 permeating through all our activities.

We are looking forward to meeting researchers from all over the world for an exciting and varied scientific program. In addition to an engaging scientific program, attendees will enjoy a range of diverse social events as well as Kunming's many attractions, including a visit to Yunnan Ethnic Village that showcases the culture and customs of all the ethnic groups in Yunnan Province. We hope that you will take the opportunity to socialize and network with new acquaintances, and build upon

those relationships which have already been established to sustain our collaboration.

Please consider attending the 13th World Congress on Parasitic Plants. Mark the date in your calendar and register for the Congress. On behalf of the Organizing Committee and the Society, we are looking forward to meeting you in Kunming.

The Congress website is:
http://wcpp13.csp.escience.cn/dct/page/65540

Professor Koichi Yoneyama IPPS President
Professor Airong Li Local Organizer

PARASITIC PLANTS IN THE ALGARVE REGION OF SOUTHERN PORTUGAL

The Algarve of southern Portugal has one of the richest floras in Europe. The region has an Atlantic outlook; however its flora is typically Mediterranean, and noteworthy for its extraordinary diversity of parasitic plants in particular, a handful of which are described here. A full species list of the parasitic plants in the region is included in the recently published *Field guide to the wildflowers of the Algarve* (Thorogood and Hiscock 2014) – the most comprehensive field guide of the flora written to date.

One of the most spectacular parasitic plants which grows in the Algarve is *Cistanche phelypaea*, a striking yellow holoparasite of halophytic shrubs in the Amaranthaceae family, for example *Arthrocnemum perenne* and *Atriplex halimus*. The species is rare in Europe, but fairly frequent around the coasts of the Algarve, typically in estuaries, saltmarshes and dune systems. Indeed in some places such as on the saltmarshes of Faro (the Algarve's administrative capital) it grows in great stands, and is a real spectacle in late March to early April. Like many parasitic plants in the region, the abundance of the plant varies from year to year, and in some years (for example in 2014), it can be very scarce. The large, bright yellow, campanulate corolla suggests that the plant is insect-pollinated, however little is known about the breeding system of this species. The seeds are much larger than those of related *Orobanche* species, and are presumably water-dispersed. Attempts by the author to cultivate *Cistanche* in pots of *Atriplex halimus* grown in brackish water have been unsuccessful. Another even rarer holoparasite that occurs in the region is the Maltese Fungus, *Cynomorium coccineum*. This peculiar and poorly understood species was previously more widespread in the Algarve, but has suffered a dramatic reduction through tourist-driven development of the region's southern coastline in recent decades. For example, the plant appears to have all but vanished from a previous stronghold at Alvor, previously a quaint fishing village where it grew alongside *C. phelypaea* in the saltmarshes, which have now been developed beyond recognition. *Cynomorium coccineum* can still be found on a few unstable sea cliffs in the Portimão area on the south coast of the Algarve in April and May. Like *C. phelypaea*, *C. coccineum* is a halophytic holoparasite which is parasitic on shrubs in the Amaranthaceae family. Very little is understood about the ecology and host specificity of this curious parasite.

The Algarve is of particular interest for its diversity of broomrapes (*Orobanche* spp.). *Orobanche foetida* is among the most common species in the west, which parasitizes legumes such as *Ononis natrix* and sends up spectacular, blackish-purple spikes up to a metre tall in late spring.

The far southwest of the Algarve is also home to a myriad of host-specific ecotypes in the taxonomically complex *Minores* group, for which further systematic attention is required. Common broomrape (*Orobanche minor*) is frequent in ruderal habitats on exotic host species, for example on *Gazania* spp. and *Tropaelium majus* on road cuttings and landscaped areas. *Orobanche minor* also grows on the windswept and isolated Cape St. Vincent on vetches such as *Onobrychis humilis*, alongside stands of an, as yet, undescribed taxon which shares morphological characteristics with both *O. minor* and *O. picridis*, and exclusively parasitizes carline thistles (*Carlina corymbosa*). These taxa co-occur with a third, poorly understood species, *O. calendulae* which has rather more robust spikes and a yellow (rather than pink) stigma, and infests clumps of calendula (*Calendula suffruticosa*). Gene flow amongst these co-occurring taxa cannot be ruled out. Like many of the rarer broomrapes, *O. calendulae* is poorly circumscribed and its relatedness within the *Minores* group remains unclear. It is uncommon in the region, and restricted to rocky sea cliffs and shale slopes in the far southwest. Finally, populations of a fourth cryptic taxon occur locally on dunes and coastal shales on the western sea belt of the Algarve which are parasitic on *Plantago coronopus*. This taxon is characterised by very dense, ovoid inflorescences and based on its morphology appears to be closely related to *O. amethystea* (typical populations of which occur further east in the Algarve) and also *O. litorea*, a coastal species occurring on Sicily and Sardinia. A holistic approach encompassing host specificity, morphometrics and DNA sequence data is required to tease apart the relationships of this taxonomically difficult group in the Algarve and further afield.

The curious red and yellow holoparasite *Cytinus hypocistis* is fairly frequent on rock roses (*Cistus* spp.) on dunes, garrigue and maquis in the Algarve. The closely related *C. ruber* which has pink flowers and parasitizes *Cistus albidus* also grows in the Algarve but is much less frequent. Surveys carried out by the author demonstrate that populations of *C. hypocistis* are host specific in the region, (Thorogood and Hiscock 2007) showing preferences for either *C. monspeliensis*, *C. ladanifer* (and sister species *C. palhinae*) or for *Halimium halimifolium*. Subtle morphological distinctions exist amongst these host-specific ecotypes, and it is possible that isolation by their respective hosts' distinct ecologies is driving their genetic divergence; indeed genetic races of *Cytinus* associated with host lineages have been reported from across the Mediterranean basin (de Vega *et al*., 2008). Like many parasitic angiosperms, little is known about the ecology and life history of *Cytinus*, but it has been established that the plant is ant-pollinated (de Vega *et al*., 2009), and its minute, dust-like seeds appear to be wind- dispersed.

Among the most common hemiparasites in the Algarve are *Osyris alba* and *O. quadripartita* (also described as *O. lanceolata*). *Osyris alba* frequents the baroccal (eucalyptus forest fringes), whereas *O. quadripartita* is common to subdominant in sclerophyllous vegetation at sea level. Traditional morphological keys have placed importance on leaf dimensions and pinnate leaf venation which are continuous to a degree, at least in the Algarve, and flower morphology along with bract dehiscence in fruit, would appear to be more reliable diagnostics in the field. Vegetation surveys suggest that *Osyris* does not show strong host specificity in the region (Thorogood CJ and Hiscock SJ, unpublished data), and *O. alba* is established to parasitize a wide range of hosts (Qasem, 2006). However plants often appear in clumps alongside other berry-producing shrubs, presumably as a result of bird-mediated co-dispersion, which may be a catalyst for host availability.

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Chris Thorogood

HELIXANTHERA CYLINDRICA IN CAMBODIA

Dr Chung Gait Fee recently sent us photos of this colourful mistletoe from about 160 km SW of Phnom Penh in Cambodia (70 km N. of Sihanoukeville through National Road No 4). Dr Don Kirkup has confirmed its identity as *Helixanthera cylindrica* and notes that there is nothing else much like it with the lax racemes, long pedicels and relatively slender large flowers. It is quite widespread and often found on cultivated trees. Flora Malesiana gives the distribution as Burma to Vietnam; Malesia: (Sumatra, Peninsular Malaysia, Borneo, Java, Celebes, Bali) and the recorded hosts include *Dalbergia, Eugenia, Garcinia, Hevea, Leptospermum, Mangifera, Parkia, Planchonlla, Schima* and *Tristania*.spp.

Photos Mr Chung Gait Fee

STRIGA GESNERIOIDES ON TOBACCO IN ZAMBIA

In December 2013, *Striga gesnerioides* was seen to be affecting tobacco on a farm in the Choma area, Southern Province, Zambia. A small number of crop plants were found to be infected. The parasite was then seen in a second field on the same farm in January, 2014 and was also found on a second farm where the infestation was much more extensive and the crop suffered serious symptoms of yellowing, wilting and eventually death.

The problem has been reported previously in Zimbabwe but this is thought to be the first report from Zambia.

With thanks to Messrs Peter Rorbye and Lars Gruner, Japan Tobacco International Zambia Ltd., for information and photos.

OROBANCHE CRENATA IN UK – AN UPDATE

A serious infestation of *Orobanche crenata* in faba beans in Kent, UK, was briefly reported in Haustorium 63 and later discussed at the *O. crenata* Workshop in Rabat, Morocco (reported on in issue 64). The Kent infestation involved several fields, the main one having a uniform, dense population exceeding 100 spikes per sq m in places, over an area of about 15 ha. The crop was reduced by at least 80%. The origin of the infestation has not been fully explained but appears to involve the use, some time in the past, of uncertified seed (on this or the adjacent farm) obtained from a local cooperative granary which stores grain for farmers who can later retrieve seed - not necessarily their own. Such retrievals should be used only for feed, but if used for seed, it provides a possible means of spread from a distant farm. For local spread it is thought combine harvesting will have been a big contributor as the thrashing involved throws seeds into the air to be taken by the wind.

Now a new infestation has been reported further north in Hertfordshire, but somewhat nearer (20 miles) to the historic occurrences in Essex which have been recorded sporadically since the 1950s. These have been very local and usually involved only garden vegetables or wild *Vicia* species. Only in 1997 when peas were sown on a farm scale in the neighbourhood, there was a massive infestation of several 100 thousand plants (Adams, 2003). Peas have not been grown again and records since then for that district have once more been sporadic, the last recorded in 2006 (Rumsey, 2014).

There is no evidence for any new introduction from abroad in recent years, so it is assumed that all these instances originate from the Essex focus. We await

DNA study of seed samples to confirm this. A further unresolved question is why we have these apparently successful populations so far north of any other in Europe. Global warming is one possibility, but this should not directly favour the weed. Evolution or adaptation to local temperature and moisture conditions would seem more likely, but again no work has yet been devoted to comparing the germination and dormancy behaviour of UK samples to those from the Mediterranean.

Now there is concern that the problem could become more important in UK as new EU regulations increase the popularity of peas and beans as a rotational crop.

Meanwhile attention is drawn to the situation in Ethiopia as described by Tekley Abebe *et al*. (2013), listed below. There the problem was first seen in the late 1980s but is now spreading alarmingly and threatening farmers' ability to grow any pulse crops over a substantial and increasing area of Tigray and neighbouring Provinces.

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Chris Parker

PRESS REPORTS

Award for conservationist (extract)

Trevor Thompson has gone from trapping possums with his parents as a youngster to winning a national conservation award. Mr Thompson, of Mt Bruce, has been presented with New Zealand Forest & Bird's annual Golden Spade award for his volunteer conservation projects in Wairarapa. At present, he is working on three major projects - with renga renga lilies on the Wairarapa coast, native species of mistletoe and the *Coprosma wallii* shrub.

Mr Thompson said he first developed a passion for conservation when he laid his first possum trap as a boy. 'Like many kids of my generation, I went possum trapping for a bit of pocket money,' said Mr Thompson. 'After that, I just kept going. I'm interested in nature and protecting it because my parents brought me up to appreciate it.'

One of Mr Thompson's most involved projects is propagating various species of mistletoe throughout Wairarapa, which he has been working on for 25 years. 'I did some reading on mistletoe in Wairarapa and it said that the Tararuas should be ablaze with red with all the mistletoe plants,' he said. 'I knew that certainly wasn't the case.' There are currently nine species of native New Zealand mistletoe, but populations have declined since the early 1900s due to pests and a decline in native bird species, which act as pollinators. At one point, said Mr Thompson, only three examples of *Alepis flavida* (yellow mistletoe) existed in Wairarapa, all living in one tree - but he since increased the number of host trees to seven and propagated a dozen plants. He runs workshops for people interested in planting and propagating mistletoe, which he said is 'quite an involved process'.

Erin Kavanagh-Hall, The New Zealand Herald
July 1, 2014

The hunt for *Dendropemon caymanensis*.1

The Cayman Islands Department of Environment (DoE) are currently collaborating on a project with longtime partner Royal Botanic Gardens Kew (RGB Kew), UK, to locate a mysterious mistletoe species – *Dendropemon caymanensis* (Loranthaceae) - known to be located only on Little Cayman. There is very little known about this parasitic plant but records from botanist George Proctor, author of *Flora of the Cayman Islands*, indicate that it is possibly located within the northeastern interior of Little Cayman and is a parasite of the Headache Bush (*Capparis cynophallophora*) and the Black Candlewood (*Erithalis fruticosa*). No one has seen this plant since 1991 and there is no photographic record – just a single herbarium collection as proof of its existence. In order to find this plant, the DoE and RGB Kew used a mini unmanned aerial vehicle (UAV). The UAV is a small flying vessel with a camera; it weighs less than a kilogram and is controlled by a sophisticated remote computer system. It takes aerial photographs on a pre-programmed course, mapped using GPS coordinates.

The search team included DoE's Research Officers Jessica Harvey and Jane Haakonsson, and GIS Officer Jeremy Olynik; and RGB Kew's Species Conservation Assessment Officer Steven Bachman and Kew's GIS Officer Justin Moat; and from the Blue Iguana Recovery Programme (BIRP), Frederic Burton, acting as the local plant specialist. Mr Moat and Mr Bachman are highly trained and certified UAV pilots with previous experience in the UK and Peru, and both are off to Burkina Faso after their trip to Cayman. The DoE worked closely with the Civil Aviation Authority (CAA) to establish and follow all safety protocols. This included ensuring all launch and search sites were inspected and approved by the CAA prior to the project start date. Approval also was granted by the Lands and Survey Department, and all flights were coordinated and approved by the Grand Cayman and Cayman Brac Air Traffic Control towers prior to takeoff. This is very important as flying UAVs without authorisation could be a hazard to all types of aircrafts, including police helicopters and mosquito jets. Launching and landing sites were also granted permission from the relevant land owners.

Survey areas included the Colliers Reserve and Salina Reserve in Grand Cayman, where locations of the host plant species are already known. Images taken from these areas will be compared with images taken in Little Cayman. The project will also allow the DoE to try a new method of monitoring the booby colony in the Booby Reserve on Little Cayman, which could prove highly time and energy efficient compared to previous monitoring techniques.

Upon completion of this project the DoE hopes to determine the true status of the endemic *Dendropemon caymanensis* in the Cayman Islands, while also gathering data on the current status of the booby breeding area in the Booby Pond Reserve. This project was possible with assistance from the Mohamed Bin Zayed Conservation Group, which donated just more than US$3,000 to the project through a grant; the Cayman Islands National Trust including BIRP; the CAA; and RGB Kew.

This project started on 12 June and was completed on 19 June. For more information, contact the DoE at doe@gov.ky , at 949-8469 during working hours or on our Facebook page.

Angela Piercy, Cayman Islands Government
4 July 2014

The hunt for *Dendropemon caymanensis.* 2

Extract from further press release: **Researchers hunt down mystery plant**

Although the search team was unable to see any signs of the species, Ms. Harvey said there is a chance it could show up in the footage captured through a mini aerial drone, which takes photographs on a pre-programmed course mapped out using GPS coordinates. ‘We are still waiting for all the imagery from the drone to be processed, which may take some time ... We hope to get it in the next couple weeks,’ she said.

Mr. Proctor discovered two specimens of the plant in Little Cayman, which he said was related to *D. purpureus and D. rigidus* but a lot smaller.

Jewel Levy, Cayman compass.com
18 July, 2014

NB See also the literature item Caraballo-Ortiz and Carlo, 2013.

Results show Africa can eradicate *Striga*

In the last three years, the ISMA project has deployed an integrated approach for managing *Striga* while improving soil fertility and reducing the *Striga* seed bank for sustainable increases in crop yields in some selected communities in Nigeria and Kenya. Dr David Chikoye, IITA Director for Southern Africa, said results from the project showed that the battle against *Striga* could be won. ‘We will eradicate *Striga* in Africa just as America did,’ he said at the Annual Review and Planning Meeting of ISMA in Abuja held 21-23 May.

IITA Deputy Director General for Research, Dr Ylva Hillbur, in her opening remarks called for concerted efforts from partners to tackle the *Striga* challenge. Over 70 stakeholders gathered in Abuja for the 3-day annual event which sought to evaluate the successes, challenges, and opportunities of the project, identify gaps, and plan how to implement the decisions to successfully scale out *Striga* management technologies to rural farmers in the next coming year.

Dr Mel Olouch, ISMA Project Manager, said ‘We have established partners and stakeholder capacity in Kenya and Nigeria and installed *Striga* seed processing facilities in Kenya; awareness is high. Already, registration of the herbicide has been

achieved in both countries and we expect to release two IR maize varieties in Nigeria in 2014 (see following item). He said that some of the scaling up approaches that need to be adopted include the use of volunteer farmers to reduce costs and increase ownership, and use of complementary inputs and empowerment of stakeholders to give farmers the best technologies.

Specifically, these included cultural practices such as intercropping maize with legumes (soybean and groundnut); crop rotation of maize with soybean; a 'push-pull' technology that involves intercropping cereals with *Striga*-suppressing *Desmodium* forage legume; using *Striga*-resistant maize and cowpea varieties; using maize varieties resistant to Imazapyr (IR)—a BASF herbicide (StrigAway®) which is coated on the maize seeds and which kills the *Striga*; and adopting *Striga* biocontrol technologies which uses a *Striga* host-specific fungal pathogen.

The Senior Program Officer for Agriculture Development of the Bill & Melinda Gates Foundation, Dr Yilma Kebede, in his address, looked at future plans for the project while expressing that the project is close to reaching farmers and addressing their concerns/problems due to *Striga*. He emphasized that there needs to be concerted efforts to profile the farmers reached such that the take-home message will be sustainable for them in the long run. 'Demonstrations need to be focused and there is greater need to engage a wide range of stakeholders in controlling *Striga*. The various institutions involved should synergize to promote the project and scale out to farmers because no one partner will be responsible for the success of the technologies in the end,' he said.

Infesting up to 4 million hectares of land under maize production in sub-Saharan Africa, *Striga* causes farmers yield losses of up to 80% representing about US$1.2 billion, and affects approximately 100 million people on the continent.

Project partners include CIMMYT, AATF, ICIPE, Bayero University, KNARDA, BSADP, seed and chemical companies, extension workers, scientists and the private sector.

Adeleke Mainasara, Africa Science News
26 May 2014

Nigeria releases first generation of herbicide-resistant hybrids

The Nigerian National Variety Release Committee (NVRC) has released the first generation of maize hybrids, resistant to metsulfuron methyl herbicide, that are also endowed with resistance to the noxious parasitic weed *Striga hermonthica.*The hybrids were developed by the International Institute of Tropical Agriculture (IITA) in partnership with DuPont Pioneer Seeds using conventional breeding with funding from IITA and the Integrated *Striga* Management in Africa (ISMA) project as part of strategies to control *S. hermonthica* in maize. The hybrids were released as P48W01 and P48W02 and are recognized as IITA IR-Maize Hybrid 2 and IR-Maize Hybrid 4. The hybrids have a yield potential of up to 5 t/ha under *Striga* infestation in comparison with local varieties that produce less than 1 t/ha in such conditions. 'These hybrids are the product of introducing a single nuclear gene that confers resistance to imidazolinone herbicides, including metsulfuron methyl (MSM), into inbred lines with known field resistance to *S. hermonthica,'* IITA Maize Breeder, Dr. Abebe Menkir, said.

Recent baseline studies conducted under the ISMA project showed that farmers ranked *Striga* as the number one constraint to maize production in northern Nigeria, with 50 to 100% of the households reporting *Striga* incidence in their farms. The parasitic weed infests more than 9 million ha planted to millet, maize, and sorghum in Nigeria and severely lowers the production capacity of these crops. Dr Menkir said yield losses in maize from damage by *S. hermonthica* varied from 20 to 80% among subsistence farmers, but 100% loss could occur in susceptible cultivars under severe infestation in marginal production conditions.

The released herbicide-resistant hybrids allow seeds to be planted that have been treated with low doses of metsulfuron methyl herbicide. This targets *S. hermonthica* before or at the time of its attachment to the maize root, killing the parasite underground before it inflicts damage on the crop. These hybrids can thus be used to deplete the *Striga* seed bank in the soil and minimize yield losses in subsequent cereal crops. MSM-reated seeds of these hybrids can be integrated into the diverse farming systems in Nigeria because the herbicide effectively controls the parasite at a low rate of application.

The ISMA project works with the private sector to catalyze the process of producing and marketing

treated seeds of herbicide-resistant maize hybrids to smallholder farmers in Nigeria to control S. hermonthica. Other collaborating partners engaged in extensive testing of these hybrids include the Institute for Agricultural Research (IAR) and Agricultural Development Programs in Bauchi and Kano States. The ISMA project is being implemented by IITA in partnership with CIMMYT, ICIPE, BASF Crop Chemical, AATF and national partners in Kenya and Nigeria.

Crusoe Osagie, ThisDayLive
01 Jul 2014

New initiative to upscale commercialisation of anti-striga weed in maize technology launched

A new initiative has been launched to upscale use of commercialisation of StrigAway™ – an herbicide-resistant seed and treatment – to improve productivity and competitiveness of smallholder maize farmers. The initiative funded by the USAID brings together the African Agricultural Technology Foundation (AATF) and Feed the Future Partnering for Innovation and will help AATF and its partners, BASF, International Maize and Wheat Improvement Center (CIMMYT), and six local seed companies, promote the technology package in Kenya, Tanzania, and Uganda.

'This partnership is really about increasing the food security of thousands of smallholder farmers in East Africa. Farmers who have access to this technology will have better maize yields and higher earnings from the sale of excess produce,' said Denis T. Kyetere, the Executive Director, AATF.

StrigAway™ combats *Striga*, a parasitic plant that affects the agricultural productivity of approximately1.4 million hectares in Kenya, Tanzania, and Uganda. Commonly known as witchweed, this parasitic plant can cause a 20 to 80 percent crop loss in maize, leading many farmers to abandon fields with heavy *Striga* infestation. Maize, the staple food for the majority of East Africans, is especially susceptible to *Striga* and continuous cereal monocropping has intensified the *Striga* problem. *StrigAway™*, which includes conventionally bred herbicide resistant maize varieties and an herbicide seed coating, was developed by BASF and CIMMYT.

As part of the United States government's Feed the Future Initiative, Partnering for Innovation is expanding commercial access of transformational technologies to smallholder farmers to improve productivity and incomes quickly and sustainably. 'Large problems can't be solved alone, which is why this is Feed the Future Partnering for Innovation's largest grant to date, totaling more than US$3 million. It involves multiple partners including an international NGO, a multi-national corporation, a research institute, and local private sector companies,' said Brenna McKay, Partnering for Innovation Grants Program Director.

By the end of the three-year performance-based grant, there will be a total of 4,000 demonstration plots and nearly 1,000 metric tonnes of seed sold to over 20,000 smallholders in the target countries. Technical support for local seed companies will ensure the seed is commercially multiplied, treated, and available for purchase through a vast network of agricultural input retailers for smallholder farmer customers. AATF will work with partner seed companies to promote *StrigAway™*, including managing a discount programme for select agro-dealers, offering promotional seed packs to farmers, and leading a campaign to increase the understanding of the product.

Raymond Gichuki, Africa Science News
04 February 2014

Finding a cure for cancer with mistletoe? Believe Big is helping to kiss cancer goodbye

Mistletoe therapy is used widely in Germany and Switzerland for cancer treatment. However, until a clinical trial is done here in the United States, it cannot be offered to patients as standard of care. Studies in Europe have shown that mistletoe treatments along with a high alkaline diet are key components that can aid the body when fighting and overcoming cancer. The liquid extract of the mistletoe plant has been used as an alternative method to treat cancer for close to a century. Mistletoe injections are among the most widely used unconventional cancer treatments in Europe. In Europe, the most common commercial preparations are sold under the trade names Iscador and Helixor. Currently, only the European species of the mistletoe plant (*Viscum album*) is used for cancer.

Believe Big founder, Ivelisse Page, was cured of her stage 4 colon cancer by using mistletoe extract and a high alkaline diet. She is now 5 years cancer free. Clinical trials are typically funded by pharmaceutical companies but mistletoe is natural, so this is not an option. This is truly an historic event because this clinical trial is patient driven and

is being entirely funded by private donations. Currently only 50 Anthroposophic physicians are trained to treat with mistletoe in the U.S. 'We have 90% of the money needed to start Phase I of the trial. We are thrilled to be taking the first steps towards a cure for this devastating disease,' said Patty Buddemeyer, Assistant Director of Believe Big.

European oncologists have used extracts of mistletoe for the past 90 years. One study showed that individuals who took mistletoe extract in addition to their conventional treatment lived 40% longer. Currently, 1 out of every 3 oncologists in Germany prescribes mistletoe. Not only has mistletoe been found to diminish tumor-related pain, increase the immune response, prevent re-occurrence during the watchful waiting period, but it also offsets the terrible side affects of chemotherapy—nausea, vomiting, and lack of appetite.

Believe Big is a non-profit organization formed in 2011 to help families navigate the cancer journey by providing resources, direction and hope. Now Believe Big and Johns Hopkins are collaborating on a mistletoe clinical trial that brings the conventional and complimentary medical communities together. Johns Hopkins researchers say mistletoe treatment can change the way doctors go after cancer. Dr. Luis Diaz, professor of oncology and senior researcher at Johns Hopkins, and Dr. Peter Hinderberger, expert in complementary medicine, both treated Ivelisse and are leading the clinical trial at Johns Hopkins. Dr. Hinderberger has used mistletoe in his practice successfully for over three decades. The clinical trial team is hoping that with this study, mistletoe will be included in the standard of care treatment protocol for cancer.

For more information about Believe Big and to find an Anthroposophic physician who is currently treating with mistletoe, visit http://www.believebig.org.

Anyone wishing to be a part of this historic event can make a tax deductible donation for this trial by visiting http://www.gofundme.com/believebig-mistletoeTrial.

Read the full story at http://www.prweb.com/releases/2014/02/prweb11548215.htm

Read more at: http://www.digitaljournal.com/pr/1719032#ixzz2swCLw025

Digital Journal, Baltimore, MD
February 04, 2014

THESES

Influence of Dwarf Mistletoe (*Arceuthobium americanum*) on stand structure, canopy fuels, and fire behavior in lodgepole pine (*Pinus contorta*) forests 21-28 years post-mountain pine beetle (*Dendroctonus ponderosae*) epidemic in Central Oregon. Michelle C. Agne. MSc in Science in Sustainable Forest Management, September 18, 2013. Supervisor: David C. Shaw

Abstract:
Lodgepole pine (*Pinus contorta*) forests are widely distributed throughout western North America. However, the lodgepole pine forests of central Oregon are ecologically unique to the region, with a mixed severity fire regime, low cone serotiny, and their presence as a climax species. Although much research has been conducted regarding the stand structure and disturbance regimes of lodgepole pine, most of the research regarding lodgepole pine has occurred in the intermountain west. Research findings from other geographical locations may not be applicable to central Oregon lodgepole pine forests, given their distinctive ecological attributes. Lodgepole pine forests are subject to three widespread disturbance regimes: mountain pine beetle, dwarf mistletoe, and fire. Although much is known about each of these disturbances in lodgepole pine, little is known about their interactive effects. These disturbances occur pervasively in lodgepole pine and are known to co-occur on the landscape, so their effects must be investigated and interpreted simultaneously. This thesis describes the combined influences of dwarf mistletoe and mountain pine beetle on stand structure, canopy fuels, and fire behavior in central Oregon lodgepole pine forests.

We randomly selected and sampled 39 0.075-hectare plots within 13 stands in the Deschutes National Forest in central Oregon. The plots varied from 0 to 4 in average dwarf mistletoe rating (DMR) and all had experienced a mountain pine beetle mortality event 21 to 28 years prior to sampling. In Chapter 2, we compared stand density, stand basal area, canopy volume, proportion of the stand in dominant/codominant, intermediate, and

suppressed cohorts, and average height and average diameter of each cohort, across the range of DMR. We found strong evidence of a decrease in canopy volume, suppressed cohort height, and dominant cohort diameter with increasing DMR. There was strong evidence that as DMR increases, proportion of the stand in the dominant/codominant cohort decreases, while proportion of the stand in the suppressed cohort increases. Structural differences associated with dwarf mistletoe create heterogeneity in this forest type and may have a significant influence on the productivity, resistance, and resilience of these stands. These findings show that it is imperative to incorporate dwarf mistletoe effects when studying stand productivity and ecosystem recovery processes.

In Chapter 3, we compared canopy base height, the fuel parameter that drives passive crown fire, and canopy bulk density, the fuel parameter that drives active crown fire, over the range of DMR to determine the effect of dwarf mistletoe on canopy fuels. We then used BehavePlus to model passive crown fire and active crown fire in our plots. We found strong evidence of a decrease in canopy base height with increasing DMR. There was suggestive evidence of decrease in canopy bulk density with increasing DMR, after accounting for stand density. The results of the fire behaviour modelling suggest that at low to moderate wind speeds, likelihood of passive crown fire increases with increased DMR. However, under more extreme weather (wind speeds >20 mph), the effect of dwarf mistletoe on passive crown fire potential was not shown to be important. The potential for active crown fire was extremely low in our plots, regardless of DMR. These findings show that dwarf mistletoe is having a significant effect on the potential for passive crown fire in lodgepole pine forests 21 to 28 years post-mountain pine beetle epidemic, and should be considered in future research regarding post-mountain pine beetle fuels and fire behaviour.

Resistance of chickpea (*Cicer arietinum*) and tomato (*Solanum lycopersicum*) to field dodder (*Cuscuta campestris*). Hadas Miryamchik. MSc Thesis Hebrew University of Jerusalem July 2013. Supervisors Raruch Rubin and Yaakov Goldwasser

Summary
Field dodder (*Cuscuta campestris* Yuncker), is a worldwide troublesome above-ground holoparasite that sustains on plants and substantially reduces crop yields. Field dodder seedlings coil around host stems and leaves, produce pre-haustoria that establish a connection to the host plant by haustoria that penetrate and fuse into the host vascular tissues. The parasite then exploits the host plant by withdrawing assimilates and other solutes causing severe damage to the host plant.

At first I scanned a wide range of chickpea genotypes in order to reveal resistant genotypes to field dodder infection. Those genotypes were determined by using a parasitic development index set by visual parameters. Two genotypes which exhibited good tolerance to the parasite were found: the variety 'ICCV 95333' from ICRISAT and the Israeli variety 'Hazera 4' from 'Hazera Genetics'. In addition- two dodder-resistant , 'Heinz' canning tomato varieties were included. Both genotypes were grown in pots sown with field dodder. In the resistant genotypes the parasite failed to penetrate the epidermis and the vascular systems of the host. We found that this phenomenon also occurs but at less intensity in secondary attachments obtained by placing coiling field dodder stem segments on the mature resistant chickpea and tomato host plants.

Anatomic sectioning and microscopic examination- This staining was carried out by the assumption that woody materials such as lignin contribute to the resistant mechanism in the resistant genotypes. Samples of tomato and chickpea stems infested by field dodder were collected and fixed in FAA, embedded in paraffin and in the end were sliced by microtome (Leica RM2245) at a thickness of 12 microns. The samples were stained in safrnin and fast green and then examined under a light microscope. I found that the internal structure of the stems was similar in the susceptible genotype and resistant genotype whether parasitized or non-parasitized with field dodder. These data suggest that the observed tolerance is due to factors in the outermost stem layer that separate the plant from the surrounding environment. In the resistant tomato genotype, pre-haustoria could not penetrate through the epidermis. Cells in the outer layer of the pre-haustoria turned black, which indicates cell death resulting from a HR (Hypersensitive Response) reaction at the contact area.

Image processing system LC-Polscope- This system was used in order to evaluate the cellulose fibers content. This image processing system helps calculate the Retardance parameter which Indicates cellulose fiber layer thickness and density. I found that the resistance mechanism in tomato and chickpea is not associated with the thickness of the cellulose crystal structure in the stems.

Removal of the epicuticular layer and epidermis of the host plant- This experiment was carried out by applying a uniform layer of cellulose acetate dissolved in acetone on the plant stem or by fine cutting with a scalpel. The results suggest that those layers in chickpea and tomato plants may have a partial role in the mechanism of resistance.
While working on this thesis I found that in some experiments the resistance phenomena decreased. So I decided to examine the influence of different environmental factors on the resistant phenomena and tried in parallel to increase the parasite control by combining the resistant genotype with selective herbicides as described below.

Environmental factors: temperature, day length and shading- Each of these factors was examined separately in a controlled Phytotron. High temperatures of 43/82 ºC (day/night) negatively affected dodder germination, penetration and later on the development of attachments to the host. All the environmental factors affected the vitality of the host and thus indirectly affected the development of the attached parasite. A short day regime (8 light hours) influenced the development of chickpea plants by encouraging vegetative growth but did not affect the resistance mechanism to field dodder. Light intensity (shading) affected plant growth and development and as the shading increased, the vitality of the host plant reduced, resulting in a concomitant parasite-inhibited growth. These experiments that were conducted under controlled environment conditions did not reveal differences between susceptible and resistant genotypes. Although I could not detect a specific factor affecting the resistance phenomenon, it is likely that environmental factors influence host-parasite interaction. Further studies should focus on the interaction of these environmental factors in order to elucidate the role of environmental factors involved in this phenomenon.

In addition to the studies mentioned above I examined the effect of various herbicides including cell division inhibiting herbicides (pendimethalin, trifluralin, pronamid and isoxaben) and ALS (acetolactate synthase) inhibiting herbicides (imazapic, imazamox, sulfosulfuron and rimsulfuron) by direct application to field dodder seedlings, host foliage, and root application by drench to tomato and chickpea plants parasitized by dodder.

Cell division inhibitors applied directly to dodder seeds in Petri-dish experiments delayed dodder seedling early development, and inhibited their growth when applied post emergence on chickpea grown in pots. Pronamid direct application to germinating field dodder seedlings in Petri-dish experiments reduced dodder shoot length to about 40% of the untreated control. Post-emergence application of pronamid in pot experiments caused lesser damage to the parasitized chickpea host then to the non-parasitized control plants, probably due to the fact that some of the herbicide was drawn from the host by the parasite as the parasite employs a strong metabolic sink in host-parasite interactions. Nevertheless in some of the plants, after a short period I observed a regeneration of treated dodder. ALS- inhibiting herbicides did not inhibit the growth of germinating dodder seedlings when applied directly to the seeds in Petri dish. However, they were quite effective on dodder when applied on the host foliage or roots (by drench) to chickpea and tomato genotypes. The application of ALS-inhibiting herbicides on field dodder that did succeed to parasitize resistant tomato plants, in most cases significantly reduced field dodder weight in a higher manner then the reduction of field dodder weight parasitizing the susceptible tomato genotypes treated with the same herbicides. This was evident especially with the herbicide rimsulfuron. It seems that application of these herbicides on resistant genotypes results in better dodder control along with minimal damage to the host. In the majority of herbicides applied on dodder-parasitized chickpea and tomato plants we observed initial inhibition of field dodder but after a certain period stem regeneration occurred. Total parasite control was achieved only in imazapic application on tomato and chickpea plants.

The approach of combining repeated applications of reduced herbicide rates on resistant crop genotypes is promising, but further research is needed before implementing this approach safely and effectively under field conditions.

OTHER FORTHCOMING MEETING

5th Intenational Conference on Alternative Methods of Crop Protection. Lille, France, 11-13 March, 2015. Sessions will include one on resistance and varietal selection.

For information contact AFPP, 42 rue Raymond Jaclard, F-94140 Alfortville. Email afpp@afpp.net. Website www.afpp.net.

SEARCH ALL ISSUES OF HAUSTORIUM IN JUST TWO FILES

In the inaugural issue of Haustorium (December 1978) the purpose of the newsletter was stated as serving '. . . a useful purpose in keeping workers in contact with each other and with research results which are not always readily available to all concerned.' From the beginning, an emphasis of our newsletter has been to provide reviews of parasitic plant research, research that has grown exponentially in the more than 35 years we have published Haustorium.

In a continuing commitment since then, Chris Parker has assiduously searched archival and non-archival literature for Haustorium and with characteristic pith and clarity has written brief summaries that are published in each issue of the newsletter. On few occasions, he asks other experts to write them. These entries provide the world's most extensive review of the literature on parasitic plants, a database of inestimable value for researchers. Recently, he collated all the published issues into two large, searchable pdf files. Issues 1 through 48 can be accessed at http://ww2.odu.edu/~lmusselm/haustorium/pdf/haustorium1-48.pdf and issues 49 through 64 at http://ww2.odu.edu/~lmusselm/haustorium/pdf/haustorium49-64.pdf New issues will be added to the latter, as they are published.

We hope this resource will enhance the value and accessibility of this literature.

Lytton John Musselman, Old Dominion University

GENERAL WEB SITES

For individual web-site papers and reports see LITERATURE

For information on the International Parasitic Plant Society, current issue of Haustorium, etc. see: http://www.parasiticplants.org/ (N.B. currently a little out of date)

For past and current issues of Haustorium see also: http://www.odu.edu/~lmusselm/haustorium/index.shtml

For the ODU parasitic plant site see: http://www.odu.edu/~lmusselm/plant/parasitic/index.php

For Dan Nickrent's 'The Parasitic Plant Connection' see: http://www.parasiticplants.siu.edu/

For the Parasitic Plant Genome Project (PPGP) see: http://ppgp.huck.psu.edu/

For information on the EU COST 849 Project (now completed) and reports of its meetings see: http://cost849.ba.cnr.it/

For information on the COST/STREAM conference see: http://streamisrael2013.wix.com/stream-israel-2013

For information on the EWRS Working Group 'Parasitic weeds' see: http://www.ewrs.org/parasitic_weeds.asp

For a description and other information about the *Desmodium* technique for *Striga* suppression, see: http://www.push-pull.net/

For information on the work of the African Agricultural Technology Foundation (AATF) on *Striga* control in Kenya, including periodical 'Strides in *Striga* Management' and 'Partnerships' newsletters, see: http://www.aatf-africa.org/

For Access Agriculture (click on cereals for videos on *Striga*) see: http://www.accessagriculture.org/

For The Mistletoe Center (including a comprehensive Annotated Bibliography on mistletoes up to 1995, but apparently incomplete since then) see: http://www.rmrs.nau.edu/mistletoe/

For information on future Mistel in derTumortherapie Symposia see: http://www.mistelsymposium.de/deutsch/-mistelsymposien.aspx

For a compilation of literature on *Viscum album* prepared by Institute Hiscia in Arlesheim, Switzerland, see: http://www.vfk.ch/informationen/literatursuche (in German but can be searched by inserting author name).

For the work of Forest Products Commission (FPC) on sandalwood, see: http://www.fpc.wa.gov.au (Search *Santalum*)

LITERATURE

- indicates web-site reference only

A record 346 items are listed below. Those in bold are the editors' (but mainly one editor's) personal selection of the top twenty.

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of Animal and Plant Sciences 24(1): 310-314. [Confirming some antioxidant and antibacterial activities in *O. foetida* and *O. crenata.*]

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Abu-Shall, A.M.H. and Al-Eryan, M.A.S. 2014. Population status of broomrape fly, *Phytomyza orobanchia* (Diptera: Agromyzidae) with some agricultural practices under semi-field conditions. Journal of Entomology 11(1): 42-48. [Survival and emergence of *P. orobanchia* (in Egypt) was highest when buried not more than 5 cm deep in moist soil.]

Abualhasan, M., Jaradat, N., Abu-Hasan, N., Almasri, M., Taha, A.A., Rabbaa, A., Natsheh, N., Shalalfeh, S. and Najib, M. 2014. Bioactivity of *Viscum album* extracts from olive and almond host plants in Palestine. Pharmacognosy Journal 6(2): 38-44. [Claiming that extracts of *V. album* showed differing activity depending on the host but not clear from abstract. But clear that activity wss higher against *Staphylococcus aureus* than against gram-negative bacteria.]

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Adebayo, A.H., Adegbite, O.S., Olugbuyiro, J.A.O., Famodu, O.O. and Odenigbo, K.B. 2014. Toxicological evaluation of extract of *Olax subsorpioidea* on albino Wistar rats. African Journal of Pharmacy and Pharmacology 8(21): 570-578. [Results suggest that extracts of *O. subscorpioidea* may not cause any adverse effect on the liver and kidney tissues.]

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Adonu, C.C., Enwa, F.O., Anie, C.O., Gugu, T., Esimone, C.O. and Attama, A.A. 2013. Evaluation of the combined effects of *Cassytha filiformis* and *Cleistopholis patens* against some clinical isolates of *Staphylococcus aureus* by *in vitro* method. World Journal of Pharmacy and Pharmaceutical Sciences (WJPPS) 2(6): 4249-4258. [Confirming activity of *C. filiformis* alone, against *S. aureus*.]

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Al-thahabi, S.A., Colquhoun, J.B. and Mallory-Smith, C.A. 2014. Influence of temperature and plant growth stages of red clover and wheat on small broomrape (*Orobanche minor*) germination. Weed Technology 28(1): 266-271. [Germination of *O. minor* was less by wheat than by red clover, but wheat still has potential as a trap crop.]

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*Aybeke, M., Sen, B. and Okten, S. 2013. *Aspergillus alliaceus*, a new potential biological control of the root parasitic weed *Orobanche*. Journal of Basic Microbiology 2013. ((http://www.ncbi.nlm.nih.gov/pubmed/23686407) [Confirming the potential of *A. alliaceus* against *O. cumana*.]

Azam, M.N.K., Ahmed, M.N., Rahman, M.M. and Mohammed Rahmatullah. 2013. Ethnomedicines used by the Oraon and Gor tribes of Sylhet district, Bangladesh. American-Eurasian Journal of Sustainable Agriculture 7(5): 391-402. [Noting the use of *Cuscuta reflexa* for treatment of anthrax in cattle.]

Badu-Apraku, B., Fakorede, M.A.B. and Oyekunle, M. 2014. Agronomic traits associated with genetic gains in maize yield during three breeding eras in West Africa. Maydica 59(1): 49-57. [A review concluding that substantial progress has been made in breeding for cultivars with combined tolerance/resistance to the three stresses – *Striga,* drought and low nitrogen - during the past 22 years.]

Bai Ying, Li HaiYan and Chen ShiXian. 2013. Composition analysis and immunological activities of the oligosaccharides isolated from

Cistanche deserticola. International Proceedings of Chemical, Biological and Environmental Engineering (IPCBEE) 50: 157-162. [Tests indicated that extracts of *C. deserticola* presented significant effect on the mouse spleen index, increasing the phagocytosis activity of macrophages and stimulating antibody-producing cell proliferation.]

Bajwa, A.A., Shahida Khalid, Sehrish Sadia, Muhammad Nabeel and Wahaj Nafees. 2013. Influence of combinations of allelopathic water extracts of different plants on wheat and wild oat. Pakistan Journal of Weed Science Research 19(2): 157-166. [Extracts of *Cuscuta reflexa* alone and in mixtures suppressed germination of *Avena fatua*.but also damaged wheat.]

Bakhit, B.R. and Abdel-Fatah, B.E. 2013. Gene action and molecular markers associated with *Orobanche* resistance in faba bean (*Vici faba* L.). Biotechnology 12(1): 1-13. [Identifying 6 markers associated with *O. crenata* tolerance in progeny from a cross between Misr-1 (tolerant) and Giza-2 (susceptible).]

Baltazár, T., Pejchal, M. and Varga, I. 2013. Evaluation of European mistletoe (*Viscum album* L.) infection in the castle park in Lednice. Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis 61(6): 1565-1574. [Assessing the levels of infection of *Acer campestre* and *Tilia cordata* by *V. album* in the Czech Republic and finding a general correlation with tree age and (lack of) tree vitality.]

Barbu, C. 2013. Radial increments distribution on silver fir trees' stems affected by mistletoe (*Viscum album* ssp. *abietis*). A case study in Eastern Carpathians. Lucrări Ştiinţifice, Universitatea de Ştiinţe Agricole Şi Medicină Veterinară "Ion Ionescu de la Brad" Iaşi, Seria Horticultură 56(2): 419-424. [Confirming increasing reductions in radial growth of silver fir with increasing density of *V. album*.]

Bardgett, R.D. and 25 others. 2012. Plant-soil interactions and grassland diversity restoration. Aspects of Applied Biology115: 31-34. [A study exploring the role of introductions of *Rhinanthus minor* into species-poor swards to debilitate competitive grasses.]

Başaran, M.S., Ozdem, A. and Kovačevic´, D. 2013. Weed species and their management in organic sweet cherry production in Isparta (Egirdir) province. Fourth International Scientific Symposium "Agrosym 2013", Jahorina, Bosnia and Herzegovina, 3-6 October, 2013. Book of Proceedings: 211-216. [*Cuscuta campestris* among the most frequent weeds in organic cherry orchards in Turkey.]

Bellot, S. and Renner, S.S. 2014. The systematics of the worldwide endoparasite family Apodanthaceae (Cucurbitales), with a key, a map, and color photos of most species. Phytotaxa 36: 41-57. [Using morphological, nuclear 18S, and mitochondrial matR data, the taxonomy of Apodanthaceae was revised. The 36 names published in the family where reduced to ten biological species in two genera, *Apodanthes* and *Pilostyles*. *Berlinianche aethiopica* is now recognized as *Pilostyles aethiopica*.]

Bertin, R.I. 2013. Changes in the native flora of Worcester County, Massachusetts. Journal of the Torrey Botanical Society 140(4): 414-452. [Orobanchaceae among several families showing high rates of loss or decline in Massachusetts and elsewhere in the NE USA.]

Bin ZhenJun, Wang JingJing, Zhang WenPeng, Xu DangHui, Cheng XueHan, Li KeJie and Cao DeHao. 2014. (Effects of N addition on ecological stoichiometric characteristics in six dominant plant species of alpine meadow on the Qinghai-Xizang Plateau, China.) (in Chinese) Chinese Journal of Plant Ecology 38(3): 231-237. [*Pedicularis kansuensis* among 'dominant' plants studied, and shown to respond to N.]

Caires, C.S., Gomes-Bezerra, K.M. and Proença, C.E.B. 2014. A new combination in *Peristethium* (Loranthaceae) expands the genus' range into the Amazon-Cerrado ecotone. Acta Amazonica 44(2): 169-173. [A new combination, *P. reticulatum*, is proposed, based on *Struthanthus reticulatus*.]

Cakovic´, D., Steševic´, D., Ikovic´, V., Kneževic´, M. and Latinovic´, N. 2014. Contribution to the knowledge of weed flora in Bjelopavlic´i plain. Agriculture and Forestry 58(4): 25-41. [*Cuscuta caesattiana* listed among 10 invasive species. No information on hosts.]

Campagna, G. and Geminiani, E. 2014. (Integrated strategies for weeding of beet.) (in Italian) Informatore Agrario 70(1): 51-56. [Including advice on use of herbicides for control of *Cuscuta* spp.]

Caraballo-Ortiz, M.A. and Carlo, T.A. 2013. Resurrection of *Dendropemon sintenisii* (Loranthaceae): an endemic mistletoe from Puerto Rico. Phytotaxa 82(1): 1-6. (http://dx.doi.org/10.11646/phytotaxa.82.1.1) [*D. sintenisii* was thought to be known only from its original collection in Puerto Rico in 1885 and Kuijt (2011) (see Haustorium 61) included it in *D. caribaeus*, but the authors have re-identified

40 specimens as *D. sintenisii* that were collected in Puerto Rico from 1913 to 2012. They explain the taxonomic confusion and provide illustrations, information on morphology, distribution, host plants and an updated key of the 4 species found in Puerto Rico.]

Cardoso, C. And 16 others. 2013. Natural variation of rice strigolactone biosynthesis is associated with structural variation and the deletion of two MAX1 orthologs. PNAS 111: 2379–2384.

Chaskda, A.A., Mwansat, G.S. and Ottosson, U. 2013. Implications of flower developmental stage, plant isolation and microclimatic condition on a hemiparasitic plant-avian pollinator interaction. Journal of Natural Sciences Research 3(15): 26-32. [Visits by pollinating birds in Nigeria are shown to be maximum when flowers of *Tapinanthus sessilifolius* are ripe but unopened. Higher temperatures decreased visits.]

Chen Chen, Zhao XiaoHui, Yue HuiLan, Li YuLin and Chen Tao. 2014. Separation of phenylpropanoid glycosides from a Chinese herb by HSCCC. Journal of Chromatographic Science 52(5): 395-399. [Identifying verbascoside and isoacteoside from the Tibetan medicinal plant *Pedicularis longiflora*. var. *tubiformis*.]

Chen, W., Dugan, F.M. and McGee, R. 2014. First report of dodder (*Cuscuta pentagona*) on chickpea (*Cicer arietinum*) in the United States. Plant Disease 98(1): 165. [In Washington state.]

Chen JiHang, Wong HoiShan and Ko KamMing. 2014. Ursolic acid-enriched Herba Cynomorii extract induces mitochondrial uncoupling and glutathione redox cycling through mitochondrial reactive oxygen species generation: protection against menadione cytotoxicity in H9c2 cells. Molecules 19(2): 1576-1591. [Herba Cynomorii = *Cynomorium songaricum*.]

Chen JiHang, Wong HoiShan, Leung HoiYan, Leong PouKuan, Chan WingMan, Chen Na and Ko KamMing. 2014. An ursolic acid-enriched extract of *Cynomorium songaricum* protects against carbon tetrachloride hepatotoxicity and gentamicin nephrotoxicity in rats possibly through a mitochondrial pathway: a comparison with ursolic acid. Journal of Functional Foods 7: 330-341. [*C. songaricum*, is used for treating impotence in Chinese medicine and is also a popular health-promoting food, particularly in Inner Mongolia.]

Chen Rong, Zhang XinHua and Ma GuoHua. 2014. (Studies on parasitic relationship between *Santalum album* L. and leguminous plants.) (in Chinese) Journal of Tropical and Subtropical Botany 22(1): 53-60. [Showing that excellent hosts for *S. album* were *Calliandra haematocephala*, *Caesalpinia sappan*, *Acacia confusa*, *Erythrina corallodendron* and *Acacia mangium*, while *Dalbergia odorifera* and *Cassia surattensis* were intermediate and *Delonix regia*, *Ormosia pinnata*, *Leucaena leucocephala* and *Bauhinia blakeana* were unsuitable.]

China, T.F.C., Olounlade, P.A. and Salifou, S. 2014. Ethnobotanical study of endogenous methods used for the treatment of diseases of Somba cattle breed in northern Benin. Journal of Drug Delivery and Therapeutics 4(3): 91-99. [*Ximenia americana* among species included in the study.]

Chirag Prajapati and Falguni Majmudar. 2014. Diabetes mellitus, obesity, hypertension: risk factors for Metabolic Syndrome.. World Journal of Pharmacy and Pharmaceutical Sciences (WJPPS) 3(2): 2453-2466. [*Viscum album* among species showing some good therapeutic activity against 'metabolic syndrome'.]

Chitagu, M., Rugare, J.T. and Mabasa, S. 2014. Screening maize (*Zea mays*) genotypes for tolerance to witchweed (*Striga asiatica* L. Kuntze) infection. Journal of Agricultural Science (Toronto) 6(2): 160-169. [A pot experiment in which 7 out of 10 entries showed little damage and were apparently tolerant to *S. asiatica*.]

Costea, M., García-Ruiz, I., Dockstader, K. and Stefanovic´, S. 2013. More problems despite bigger flowers: systematics of *Cuscuta tinctoria* clade (subgenus *Grammica*, Convolvulaceae) with description of six new species. Systematic Botany 38(4): 1160-1187. [This installment in a series of works on subgenus *Grammica*, uses molecular (*trnL-F* and ITS) and morphological evidence to clarify the evolution and taxonomy of these dodders. An identification key, descriptions, geographical distribution, ecological data, and illustrations are provided for all taxa, some of which are newly described here.]

Dadwal, V.S. and Nisha Singh. 2013. Occurrence and management of diseases in medicinal plants of Madhya Pradesh and Chattisgarh. Journal of Tropical Forestry 29(1/2): 42-53. [Noting damage to *Santalum album* caused by *Curvularia lunata*.]

Dakskobler, I., Anderle, B., Zupan, B. and Vreš, B. 2014. (Novelities in the flora of Slovenia.) (in Slovenian) Hladnikia 33: 3-30. [Mentioning new records for *Orobanche panicii*, *Tozzia alpina* and *Viscum abietis*. In the same issue of this journal (pp. 73-77) there is an anonymous item

referring to an older record (pre-1952) of *Corallorhiza trifida*.]

Das, S.C. and Jagatpati Tah. 2013. Effect of GA_3 on seed germination of sandal (*Santalum album* L.). International Journal of Current Science 8: 79-84. [Confirming the value of GA_3 in germination of *S. album*.]

de Vega, C., Herrera, C.M and; Dötterl, S. 2014. Floral volatiles play a key role in specialized ant pollination. Perspectives in Plant Ecology, Evolution and Systematics 16(1): 32-42. [The volatiles 4-oxoisophorone, (*E*)-cinnamaldehyde, and (*E*)-cinnamyl alcohol were the most abundant compounds in *Cytinus hypocistis* flowers, attracting 4 ant pollinator species.]

Demey, A., Rütting, T., Huygens, D., Staelens, J., Hermy, M., Verheyen, K. and Boeckx, P. 2014. Hemiparasitic litter additions alter gross nitrogen turnover in temperate semi-natural grassland soils. Soil Biology & Biochemistry 68: 419-428. [Results support the hypothesis that litter from hemi-parasitic plants increases soil N availability more than non-parasitic litter, but contradicts the expectation that the hemiparasitic litter effect would be more pronounced in an oligotrophic system (involving a *Pedicularis* sp.) as compared to a mesotrophic one involving a *Rhinanthus* sp.]

Demirkan, H., Türkseven, S., Nemli, Y., Uludağ, A. and Kaçan, K. 2014. (Investigation on chemical control of broomrape (*Phelipanche ramosa* (L.) Pomel/*P. aegyptiaca* (Pers.) Pomel) in tomato fields.) (in Turkish) Ege Üniversitesi Ziraat Fakültesi Dergisi 51(1): 101-107. [Reporting the results of preliminary herbicide trials but results not clear from the English summary.]

Dettke, G.A., Lima, L.F.P. and Waechter, J.L. 2011. *Phoradendron argentinum* (Viscaceae), new mistletoe for the Brazilian flora and its general distribution in South America. Darwiniana 49(1): 86-89. [A brief description of *P. argentinum*, a key including the taxonomically closest species, photographs and a distribution map of the species are given.]

Dev, S.A., Muralidharan, E.M., Sujanapal, P. and Balasundaran, M. 2014. Identification of market adulterants in East Indian sandalwood using DNA barcoding. Annals of Forest Science 71(4): 517-522. [The common adulterant of *Santalum album, Osyris wightiana* could be readily identified using DNA barcoding.]

Dibong, S.D., Tchatat, M., Yinyang, J., Mvogo, O.P.B., Ndjib, R.C. and Mpondo, M.E. 2011. Valuation of special non-timber forest products of plant origin sold in East markets Douala (Cameroon). Journal of Animal and Plant Sciences (JAPS) 20(1): 3067-3078. [*Coula edulis* (Olacaceae) among species sold in markets for their therapeutic value.]

Dicu, G., Teodorescu, E.A., Dumitrescu, N.C., Boaghe, N. and Ionita, M. 2011. Research regarding the virulence of broomrape parasite (*Orobanche cumana* Wallr.) in southeastern of Romania. Scientific Papers - Series A, Agronomy 54: 256-261. [While *O. cumana* races E and F have been well controlled by resistant varieties. Race G is proving more difficult and it is suspected that a new race G+ may have evolved, partially overcoming the resistance in variety PR64A71.]

Dikshit, S.S., Sajeed Ali and Samuel Rai. 2014. Angiospermic phyto-parasites of the Darjeeling Himalayas and their ethnomedical importance. Environment and Ecology 32(2): 491-494. [Reviewing the ethno medicinal uses of *Viscum album, V. articulatum, Cuscuta reflexa* and *Dendrophthoe falcata*.]

Dimitrijevic´, A., Pejovic´, I., Imerovski, I., Dedic´, B., Pajevic´, S. and Miladinovic´, D. 2013. DNA isolation from dry samples of broomrape - the effect of isolation method and sample storage on DNA yield and quality. Romanian Agricultural Research 30: 349-357. [DNA isolation with DNeasy® Plant Mini Kit, Qiagen and a protocol by Rogers and Bendich (1985) could be recommended for future studies based on dried material of *Orobanche cumana*.].

Domina, G., Greuter, W., Marino, P. and Schäfer, P.A. 2013. Types of names of *Orobanche* taxa described from North Africa. Plant Biosystems 147(3): 758-766. [Accepted names and synonyms of the recognized taxa are given. Three species are illustrated, and one new combination (*O. inexspectata*) is proposed.]

Dong ShuQing, Gao RuiBin, Yang Yan, Guo Mei, Ni JingMan and Zhao Liang. 2014. Simultaneous determination of phenylethanoid glycosides and aglycones by capillary zone electrophoresis with running buffer modifier. Analytical Biochemistry 449: 158-163. [Relating to analysis of extracts of *Cistanche* spp.]

Dor, E., Aly, R. and Hershenhorn, J. 2014. Pomegranate (*Punica granatum*) as host of the broomrapes *Phelipanche aegyptiaca* and *Orobanche crenata* in Israel. Plant Disease 98(6): 859. [A first report of *Orobanche* spp. on pomegranate.]

Dor, E.; Eizenberg, H., Joel, D.M., Smirnov, E., Achdari, G. and Hershenhorn, J. 2014. *Orobanche palaestina*: a potential threat to agricultural crops in Israel. Phytoparasitica 42(2): 285-291. [*O. palaestina* normally

parasitises *Notobasis syriaca* and *Cirsium phyllocephalum* but is shown to be able to parasitise safflower, lettuce, gazania (*Gazania uniflora*), vetch (*Vicia sativa*) and artichoke. Sunflower, tomato, carrot, chrysanthemum and cabbage did not support the parasite.]

Dostálek, T., Münzbergová, Z. and Plačková, I. 2014. High genetic diversity in isolated populations of *Thesium ebracteatum* at the edge of its distribution range. Conservation Genetics 15(1): 75-86. [Populations of the endangered *T. ebracteatum* in Central Europe occupying an area greater than 300 m^2 showed high genetic diversity, whereas small populations contained less genetic diversity. Conservation priorities are discussed.]

Drumeva, M., Yankov, P., Nenova, N. and Shindrova, P. 2014. Investigation on the resistance of doubled haploid sunflower lines to some biotic factors. Agricultural Science and Technology 6(1): 11-13. [Gamma-induced parthenogenesis was applied to 15 doubled haploid fertility restorer sunflower lines. Seven lnes showed resistance to *Orobanche cumana* (races A-F) and 4 of these were also resistant to downy mildew.]

Du You. Wei Min, Ma Zhao and Guo YuHai. 2013. Effects of paclobutrazol on growth characteristics and dry matter distribution of *Tamarix chinensis* and *Cistanche tubulosa*. Journal of China Agricultural University 18(6): 107-112. [Suggesting that paclobutrazol could increase the dry matter of *C. tubulosa* by inhibiting plant height and improving net photosynthetic rate of *T. chinensis*.]

Duca, M. and Glijin, A. 2013. The broomrape effect on some physical and mechanical properties of sunflower seeds. Analele Ştiinţifice ale Universităţii 'Al I Cuza' din Iaşi. (Serie Nouă) Secţiunea II a. Biologie Vegetală 59(2): 75-83. [Studying the effects of *Orobanche cumana* infection on sunflower seed parameters and finding the most affected were 1000-grain weight (-20,1%) and mass of 1000 kernels (-20,7%).]

Duca, M., Glijin, A. and Acciu, A. 2013. The biological cycle of sunflower broomrape. Journal of Plant Development 20: 71-78. [Reviewing the biology of *Orobanche cumana*.]

Dunn, R.M., Tallowin, J.R.B., Peel. S., Chesterton, C., Cooke, A., Jefferson, R., Martin, D., Smith, B., Smith, S. and Tallowin, J. 2012. Negative effect of early-stage restoration plant species on recruitment of late-stage restoration species. Aspects of Applied Biology115: 151-156. [Sowing *Rhinanthus minor* at 10 kg/ha was among treatments used in a study which concluded that the hypothesis that generalist species used in the early stage of biodiversity restoration act as facilitators for the establishment of late-stage habitat specialists, is wrong.]

Dzoyem, J.P., Tchuenguem, R.T., Kuiate, J.R., Teke, G.N., Kechia, F.A. and Kuete, V. 2014. *In vitro* and *in vivo* antifungal activities of selected Cameroonian dietary spices. BMC Complementary and Alternative Medicine 14: 58. [*Olax subscorpioidea* extract exhibited the highest antifungal activity particularly against *Candida albicans* and *C. tropicalis*.]

Effiong, O.O., Udo, N.V. and Monday, E.N. 2014. Reduction in serum bilirubin concentration following administration of crude leaf extract of *Viscum album* (Mistletoe) in high salt fed rats. British Journal of Pharmaceutical Research 4(3): 352-361. [Concluding that oral administration of *V. album* reduces serum bilirubin concentration in high salt fed animals.]

El-Halmouch, Y., Mehesen, A. and El-Shanshoury, A.E.R.R. 2013. The potential of cell-free cultures of *Rhizobium leguminosarum*, *Azotobacter chroococcum* and compost tea as biocontrol agents for faba bean broomrape (*Orobanche crenata* Forsk.). Journal of Plant Pathology and Microbiology 4(1): 205. [Some reduction of *O. crenata* obtained (in Egypt) but exact nature of treatment not clear.]

Encheva, J. 2013. Application of embryo culture method in combination with gamma irradiation and ultra sounds (Part I). Helia 36(59): 71-83. [Mutation caused by gamma ray and ultra sound respectively contributed to the paternal components of sunflower hybrids Rada and Yana, each showing immunity to *Orobanche cumana* race G.]

Etedali, P., Behbahani, M., Rahiminejad, M.R. and Rad, J.S. 2014. Effect of crude extracts and fractions of *Cuscuta campestris* and two different hosts on peripheral blood mononuclear cells and HIV replication. International Journal of Biosciences (IJB) 4(9): 83-89. [Concluding that lutein and lupeol, in extracts of *C. campestris* (on hosts *Alhagi maurorum* and *Calendula officinalis*) are good candidates for proliferation.of peripheral blood mononuclear cells, and hence of interest in the treatment of HIV.]

Evans, B. and Borowicz, V. 2013. *Verbesina alternifolia* tolerance to the holoparasite *Cuscuta gronovii* and the impact of drought. Plants 2(4): 635-649. [Parasitism by *C. gronovii* reduced both shoot and root mass of *V. alternifolia* more

strongly in well-watered conditions than those under drought stres, indicating reduced tolerance to parasitism when water was readily available.]

Fadini, R.F., Mellado, A. and Ghizoni, L.P. 2014. A host creates an enemy-free space for mistletoes by reducing seed predation caused by a woodboring beetle: a hypothesis. Biotropica 46(3): 260-263. [An intriguing report suggesting that the beetle *Hypothenemus obscurus* may contribute to the host-specificity of *Psittacanthus plagiophyllus* in Brazil, as it preys on the parasite seeds on non-host trees but avoids the main host tree (sadly un-named in the abstract) apparently because of its gum exudates.]

Fan BoYi, Luo JianGuang, Gu YuCheng and Kong LingYi. 2014. Unusual ether-type resin glycoside dimers from the seeds of *Cuscuta chinensis*. Tetrahedron 70(11): 2003-2014. [A range of glycosides from *C chinensis* show cytotoxic activity toward MCF-7, SMMC-7721, and MG-63 cell lines.]

*Fant, J.B., Weinberg-Wolf, H., Tank, D.C. and Skogen, K.A. 2013. Characterization of microsatellite loci in *Castilleja sessiliflora* and transferability to 24 *Castilleja* species (Orobanchaceae). Applications in Plant Sciences 1(6): 1200564. (http://www.bioone.org/doi/full/10.3732/apps.1200564) [Twelve loci were identified in *C. sessiliflora* and found effective on 24 additional *Castilleja* species.]

Fernando, H.S.D. and Karunaratne, M.M.S.C. 2013. Mella (*Olax zeylanica)* leaves as an eco-friendly repellent for storage insect pest management. Journal of Tropical Forestry and Environment 3(1): 64-69. [Results confirm that the powder or methanol extracts of *O. zeylanica* act as repellants for the rice weevil *Sitophilus oryzae*.]

Fierbinteanu, A. and Dinca, V. 2013. Research on genetic and breeding sunflower for resistance to broomrape parasite (*Orobanche cumana*) in Romania. Scientific Papers - Series A, Agronomy 56: 242-245. [Reviewing the occurrence of *O. cumana* in Romania, the difficulty in finding resistance to new races and suggesting recommendations for reducing sunflower yield loss.]

*Filella, I., Primante, C., Llusià, J., González, A.M.M., Seco, R., Farré-Armengol, G., Rodrigo, A., Bosch, J. and Peñuelas, J. 2013. Floral advertisement scent in a changing plant-pollinators market. Scientific Reports 3(3434): srep03434. (http://www.nature.com/srep/2013/131205/srep03434/full/srep03434.html) [Showing that scent advertisement is higher in species that bloom early in the flowering period when pollinators are scarce than in species blooming later in the season (including *Orobanche latisquama*) when there is a surplus of pollinators relative to flowers.]

Gao Zhen, Lu Yong, Upur, H., Jing Jing and Xu Dan. 2013. Study of osteoporosis treatment principles used historically by ancient physicians in Chinese Medicine. Chinese Journal of Integrative Medicine 19(11): 862-868. [Including mention of *Cistanche* spp.]

García, M.A., Costea, M., Kuzmina, M. and Stefanovic´, S. 2014. Phylogeny, character evolution, and biogeography of *Cuscuta* (dodders; Convolvulaceae) inferred from coding plastid and nuclear sequences. American Journal of Botany 101(4): 670-690. [This is the first phylogenetic study (using *rbcL* and nrLSU) of *Cuscuta* that sampled all recognized sections and subsections of the genus. After removing discordant taxa, 4 well-supported major clades were recovered. Ancestral state analyses showed dehiscent fruits and globose stigmas to be ancestral whereas style number was ambiguous. Biogeographical reconstructions suggest an Old World origin for the genus and subsequent spread to the Americas as a consequence of one long-distance dispersal.]

Gaudin, Z., Cerveau, D., Marnet, N., Bouchereau, A., Delavault, P., Simier, P. and Pouvreau, J.B. 2014. Robust method for investigating nitrogen metabolism of ^{15}N labeled amino acids using AccQ.Tag ultra performance liquid chromatography-photodiode array-electrospray ionization-mass spectrometry: application to a parasitic plant-plant interaction. Analytical Chemistry (Washington) 86(2): 1138-1145. [Showing that young parasite tubercles assimilate inorganic N as ^{15}N-ammonium when supplied directly through batch incubation but not when supplied by translocation from host root phloem, whereas $^{15}N_2$-glutamine mobility from host roots to parasite tubercles suggests that the host-derived glutamine acts as an important nitrogen-containing storage compound in the young tubercle of *Phelipanche ramosa*.]

Gea-Izquierdo, G., Viguera, B., Cabrera, M. and Cañellas, I. 2014. Drought induced decline could portend widespread pine mortality at the xeric ecotone in managed Mediterranean pine-oak woodlands. Forest Ecology and Management 320: 70-82. [Noting the greater susceptibility of *Pinus sylvatica* to drought than *Quercus pyrenaica* in Spain and interestingly

commenting on the presence of mistletoe (presumably *Viscum album*) as a symptom, rather than a cause of crown decline.]

Gebretsadik, R., Shimelis, H., Laing, M.D., Tongoona, P. and Mandefro, N. 2014. A diagnostic appraisal of the sorghum farming system and breeding priorities in *Striga* infested agro-ecologies of Ethiopia. Agricultural Systems 123: 54-61. [Noting the importance of resistance to *S. hermonthica* as a priority for farmers in several districts.]

Geminiani, E., Campagna, G. and Fabbri, M. 2012. (Verification of different ways of use of benfluralin, propyzamide and imazamox on new alfalfa stands.) (in Italian) Giornate Fitopatologiche 2012, Milano Marittima (RA), 13-16 marzo, 2012: 587-594. [Noting that 'post-emergence applications of imazamox showed an interesting side action against *Cuscuta campestris*, optimizing the activity of preventive propyzamide-based treatments.]

Geminiani, E., Polo, A. and Fabbri, M. 2012 (Comparison among mixtures of residual herbicides for pre-emergence weed control in potato.) (in Italian) Giornate Fitopatologiche 2012, Milano Marittima (RA), 13-16 marzo 2012: 607-614. [Includes reference to *Cuscuta* sp. but no information in the abstract.]

Gnanasekar Sathishkumar, Chandrakasan Gobinath, Wilson, A. and Sivaperumal Sivaramakrishnan. 2014. *Dendrophthoe falcata* (L.f) Ettingsh (Neem mistletoe): a potent bioresource to fabricate silver nanoparticles for anticancer effect against human breast cancer cells (MCF-7). Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 128: 285-290. [In this study an aqueous leaf extract of *D. falcata* was employed as a reducing and stabilizing agent to fabricate nanosilver particles for biomedical applications which showed useful activity against human breast carcinoma cell line (MCF-7).]

González-Pérez, M.Á., Batista, F.J. and Sosa, P.A. 2013. Conservation genetics in two endangered endemics from the Canary Islands, *Helianthemum gonzalezferreri* Marrero (Cistaceae) and *Kunkeliella subsucculenta* Kämmer (Santalaceae): different life histories that involve different management strategies. Plant Systematics and Evolution 299(10): 1981-1990. [Including study of genetic variability in *K. subsucculenta*, an endangered endemic species.]

Gottschling, M., Luebert, F., Hilger, H.H. and Miller, J.S. 2014. Molecular delimitations in the Ehretiaceae (Boraginales). Molecular Phylogenetics and Evolution 72: 1-6. [A molecular phylogenetic study using nuclear ITS and plastid *rps*16, *trn*L-*trn*F, *trn*S-*trn*G produced a monophyletic Ehretiaceae containing *Bourreria* s.l., *Cortesia*, *Ehretia* s.l., *Halgania*, *Lepidocordia*, *Rochefortia*, and *Tiquilia* as well as the parasitic genera *Lennoa* and *Pholisma*.]

Gu Li, Xiong WenTing, Wang Chao, Sun HongXia, Li GuoFu and Liu Xin. 2013. *Cistanche deserticola* decoction alleviates the testicular toxicity induced by hydroxyurea in male mice. Asian Journal of Andrology 15(6): 838-840. [Extracts of *C. deserticola* alleviated the spermatogenetic cell degeneration induced by hydroxyurea and modulated the serum sex hormone levels to some extent.]

Guerra, T.J. and Pizo, M.A. 2014. Asymmetrical dependence between a Neotropical mistletoe and its avian seed disperser. Biotropica 46(3): 285-293. [Concluding that the mistletoe *Struthanthus flexicaulis* in SE Brazil depends more on the main bird fruit disperser *Elaenia cristata*, responsible for 96% of its dispersal, than the bird depends on the mistletoe, which represents only 34% of its diet.]

Gutiérrez, N. and 14 others. 2013. QTLs for *Orobanche* spp. resistance in faba bean: identification and validation across different environments. Molecular Breeding 32(4): 909-922. [Seven QTLs for *O. crenata* were identified but differed between Spain and Egypt. Three QTLs for *O. foetida* were detected. Co-localization of *Oc8* and *Of3* in chromosome V confirms a common resistance against both *O. crenata* and *O. foetida*, as previously reported.]

Habimana, S., Murthy, K.N.K., Hatti, V. and Nduwumuremyi, A. 2013. Management of orobanche in field crops - a review. Scientific Journal of Crop Science 2(11): 144-158. [A general review.]

Habimana, S., Nduwumuremyi, A. and Chinama, R.J.D. 2014. Management of *Orobanche* in field crops - a review. Journal of Soil Science and Plant Nutrition 14(1): 43-62. [Ditto!]

Hadizadeh, F., Mehrvarz, S.S. and Mirpour, M.S. 2014. Effect of *Bacillus* spp. on seed germination of selected species of the genus *Cuscuta* (Convolvulaceae). Modern Phytomorphology 6: 97-101. [Germination of *C. monogyna*, *C. europaea* and *C. campestris* was inhibited by *B. pumilus*, *B. megaterium* and *B. licheniformis*.]

Haratym, W. and Weryszko-Chmielewska, E. 2013. Structural features of flower trichomes in drug eyebright (*Euphrasia stricta* D. Wolff ex J. F. Lehm.). Acta Agrobotanica 66(4): 35-43. [Three

types of non-glandular and 7 types of glandular trichomes are described from *E. stricta*.]

Harpreet Bhatia, Manhas, R.K., Kewal Kumar and Rani Magotra. 2014. Traditional knowledge on poisonous plants of Udhampur district of Jammu and Kashmir, India. Journal of Ethnopharmacology 152(1): 207-216. [Including reference to *Cuscuta reflexa*.]

Haugan, K. 2013. Basiphilous vascular plant species found in Lierne National Park. Blyttia 71(4): 227-234. [Unexpectedly recording *Pedicularis sceptrum-carolinum* in this mountain park in Norway.]

He LiLi, Lv WenLiang and Sun GuiZhi. 2014. Review of traditional Chinese medical extracts anti primary liver cancer. China Journal of Traditional Chinese Medicine and Pharmacy 29(4): 1175-1178. [*Viscum coloratum* among plants known to have some activity against liver cancer.]

Heide-Jørgenson, H.S. 2014. Danish and other Nordic parasitic plants. (http://www.viscum.dk/abstracts/text/snyltepl anter.pdf): 40 pp. [Full English version of the book published in Danish in 2008. Comprehensive; beautifully illustrated; highly recommended.]

Hejcman, M., Hejcmanová, P., Stejskalová, M. and Pavlů, V. 2014. Nutritive value of winter-collected annual twigs of main European woody species, mistletoe and ivy and its possible consequences for winter foddering of livestock in prehistory. Holocene 24(6): 659-667. [Confirming the superior nutritive value of *Viscum album* (and *Hedera helix*) compared with other woody species.]

Hemant Nagar, Tiwari, D.K., Gaurav Dwivedi, Tripathi, R.K. and Jitendra Jena. 2013. *Loranthus longiflorus* protect central nervous system against oxidative damages of electromagnetic radiation on rat. International Journal of Green Pharmacy 7(4): 328-331. [Claiming that *L. longiflorus* (in India) may protect the central nervous system against oxidative damage from mobile phone electromagnetic field.]

Henderson, W. and Braidotti, G. 2013. Innovation and entrepreneurs. Partners in Research for Development, 2013, November: 18-19. [Including reference to ACIAR-funded research on *Santalum album* and *S. spicatum*.]

Horner, J. 2014. Pretty parasites: the mycoheterotrophs of the genus *Corallorhiza*. Coral Gables, USA, Orchids 83(1): 40-51. [Describing the taxonomy, distribution and morphology of 7 species of *Corallorhiza* occurring in N. America.]

Hou XiaoLi, Sun MingXue, Gao HuanHuan, Cui Yan and Xiao Kai. 2013. Chemical constituents from the stems of *Dendrotrophe frutescens*. Biochemical Systematics and Ecology 51: 156-159. [Identifying 8 compounds including a furan-2-carbonyl C-glycoside together with a series of polyphenols and their glycosides.]

*Hu Tao, Weng XueXiang, Xu LiShan, Cheng CunGui and Yu Peng. 2013. Recognition of FT-IR data cuscutae semen, Japanese dodder, and sinapis semen using discrete wavelet transformation and RBF networks. Journal of Analytical Methods in Chemistry 2013: Article ID 853483. (http://www.hindawi.com/journals/jamc/2013/853483/) [Confirming the value of horizontal attenuation total reflection Fourier transformation infrared spectroscopy in distinguishing the preferred *Cuscuta chinensis* from *C. japonica* and *Sinapis* contaminants.]

Hu Yang, Tian ChengMing, Cairangdanzhou, Li ZhouYuan, Li Tao, Hu Yue and Li JiRun. 2014. (Spatial distribution pattern of *Arceuthobium sichuanense* and its correlation with environment in Xianmi forest region of Qinghai, northwestern China.) (in Chinese) Journal of Beijing Forestry University 36(1): 102-108. [Concluding that crown density, slope, slope position, elevation and stand type were the main factors dictating the frequency of *A. sichuanense*.]

Huang AiGuo, Yi YangLei, Ling Fei, Lu Lin, Zhang QiZhong and Wang GaoXue.2013. Screening of plant extracts for anthelmintic activity against *Dactylogyrus intermedius* (Monogenea) in goldfish (*Carassius auratus*). Parasitology Research 112(12): 4065-4072. [*Cuscuta chinensis* among plant extracts with activity against *D. intermedius*.]

ICIPE, 2014. Desmodium intercropping eliminates striga threat and improves food security in Africa. International Centre of Insect Physiology and Ecology. Brochure: 12 pp. [A colourful and impressive description of the successful use of *Desmodium* intercropping for the control of *Striga* in East Africa.]

ICRISAT. 2013. Annual Report 2012. Partnerships for impact. ICRISAT Annual Report 2012. Partnerships for impact, 40 pp. [Noting the production of training videos on fighting *Striga*.]

IITA. 2014. Research-for-development project chalks up significant progress to save maize from parasitic Striga weed in Nigeria. IITA The Bulletin No 2219:1. [Reporting on the

Integrated Striga Management in Africa (ISMA) project being implemented in Nigeria and Kenya, funded by the Gates Foundation. See Press Release 'Results show Africa can eradicate Striga']

Inoue, T., Yamauchi, Y., Eltayeb, A.H., Samejima, H., Babiker, A.G.T. and Sugimoto, Y. 2013. Gas exchange of root hemi-parasite *Striga hermonthica* and its host *Sorghum bicolor* under short-term soil water stress. Biologia Plantarum 57(4): 773-777. [The higher transpiration rate of *S. hermonthica* even under water stress, thanks to higher stomatal density, induces continued transfer of water and solute from the host to the parasite leading to severe damage to the host.]

Ismail, A.E.A. 2013. Integration between nitrogen, manure fertilizers, cultural practices and glyphosate on broomrape (*Orobanche crenata* Forsk) control in faba beans (*Vicia faba* L.). Bulletin of Faculty of Agriculture, Cairo University 64(4): 369-378. [Field experiments involving 56 treatments repeated over two seasons supported the use of N fertilizer, and fenugreek inter-cropping, as alternatives to glyphosate which also gave good selective control.]

Ito, S., Umehara, M., Hanada, A., Yamaguchi, S. and Asami, T. 2013. Tebuconazole derivatives are potent inhibitors of strigolactone biosynthesis. Journal of Pesticide Science 38(3/4): 147-151. [Tebuconazole and two of its derivatives reduce the level of 2′-*epi*-5-deoxystrigol (*epi*-5DS) in rice.]

Ivanova, D., Milev, I., Vachev, T., Baev, V.,Yahubyan, G., Minkov, G. and Gozmanova, M. 2014. Small RNA analysis of Potato Spindle Tuber Viroid infected *Phelipanche ramosa*. Plant Physiology and Biochemistry 74: 276-282. [Results suggest the involvement of various small RNA classes in the *P. ramosa* response to PSTVd infection.]

Jamil, M., Charnikhova, Jamil, T., Ali, Z. Mohamed, N.E.M.A., Mourik, T.V. and Bouwmeester, H.J. 2014. Influence of fertilizer microdosing on strigolactone production and *Striga hermonthica* parasitism in pearl millet. International.Journal of Agricultutal Biol Biology 16: 935-940. [Doses of 2 and 4 g diammonium phosphate per hill reduced exudation of orobanchol, *epi*-orobanchol, orobanchyl acetate and 5-deoxystrigol by millet and reduced *S.hermonthica* emergence by 90%.]

Jamil, M., Charnikhova, T., Verstappen, F., Ali, Z., Wainwright, H. and Bouwmeester, H.J. 2014. Effect of phosphate-based seed priming on strigolactone production and *Striga hermonthica* infection in cereals. Weed Research (Oxford) 54(3): 307-313. [A very interesting demonstration that seed priming with phosphate can result in lower exudation of strigolactones and less *S. hermonthica* seed germination and may hence be an effective and affordable strategy to reduce *S. hermonthica* infection in cereals. Further results awaited with interest.]

Jayanthi, P., Kumar, K.M.P., Rajendran, A., Thomas, B., Sabu, M. and Pradeep, A.K. 2014. *Striga indica* (Orobanchaceae) - a new parasitic species from Southern Western Ghats of India. Feddes Repertorium 123(4): 283-290. [*S. indica*, parasitising *Euphorbia antiquorum* shows similarities to *S. gesnerioides* and *S. barthlottii*, a recently described species from Morocco, but differs in detail of calyx, bracteoles, corolla tube, corolla, etc.. Including a detailed description with keys and illustrations.]

Jia YaMin, Guan QiuNong, Jiang Yong, Salh, B., Guo YuHai, Tu PengFei and Du CaiGan. 2014. Amelioration of dextran sulphate sodium-induced colitis in mice by echinacoside-enriched extract of *Cistanche tubulosa*. Phytotherapy Research 28(1): 110-119. [Results support the potential of *C. tubulosa* extracts for clinically treating inflammatory bowel disease.]

*Jiang, L.J., Wijeratne, A.J., Wijeratne, S., Fraga, M., Meulia, T., Doohan, D., Li ZhaoHu and Qu, F. 2014. Profiling mRNAs of two *Cuscuta* species reveals possible candidate transcripts shared by parasitic plants. PLoS ONE 8(11): e81389. (http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0081389) [A comprehensive transcriptome profiling of *C. pentagona* and *C. suaveolens*, revealing incidentally an apparent evolutionary relationship with tomato; seven pairs of ESTs that appear to be shared exclusively by parasitic plants; also ESTs with sequence similarities to known plant viruses, including cryptic viruses.]

Johnsen, H.R. and Krause, K. 2014. Cellulase activity screening using pure carboxymethylcellulose: application to soluble cellulolytic samples and to plant tissue prints. International Journal of Molecular Sciences 15(1): 830-838. [Including reference to *Cuscuta*.]

Johri, P.K., Ruchita Tripathi and Reeta Johri. 2014. Testicular protein profile (SDS-PAGE) study of

tested reversible male antifertility and aphrodisiac polyherbal preparation fed albino rats with special reference to zinc deficiency. Biochemical and Cellular Archives 13(2): 277-279. [*Santalum album* among 24 aphrodiciac medicinal plants shown to have no undesirable toxic effects on testicular proteins.]

Joshi, P.N. and Soni, H.B. 2013. Host plants of *Dendrophthoe falcata* (L.F) Ettingsh. - a parasite plant in GSFC township, Vadodara, Gujarat, India. Lifesciences Leaflets 5(5): 50-59. [Recording some 35 host species of *D. falcata* and the birds associated with those hosts; confirming *Nectarinia* spp. and *Dicaeum* spp. as the main seed-dispersers or pollinators for the mistletoe.]

Jumaat Haji Adam, Rahmpah Mohamed, Aizat Juhari, M.A., Ariff, N.N.F.N. and Wan KiewLian. 2013. *Rafflesia sharifah-hapsahiae* (Rafflesiaceae), a new species from Peninsular Malaysia. Turkish Journal of Botany 37(6): 1038-1044. [*R. sharifah-hapsahiae* is described, with illustrations, and a key includes *R. azlanii* and *R. hasseltii*.]

*Jung HoeYune and 9 others. 2014. The Korean mistletoe (*Viscum album coloratum*) extract has an antiobesity effect and protects against hepatic steatosis in mice with high-fat diet-induced obesity. Evidence-based Complementary and Alternative Medicine 2013: Article ID 168207. (http://www.hindawi.com/journals/ecam/2013/168207/) [Confirming the inhibitory effects *V. album* on obesity and non-alcoholic fatty liver disease in mice, apparently mediated through an enhanced mitochondrial activity.]

Justin, B. and Vodnik, D. 2013. (Strigolactones - signal molecules in arbuscular mycorrhiza and regulators of plant growth and development.) (in Slovenian) Acta Biologica Slovenica 56(2) 23-33. [Reviewing the role of strigolactones in development of AM and their implication in other physiological processes. It discusses a possible role of strigolactones as integrators of the root-to-shoot balance, nutrient acquisition, and resource allocation.]

Kabambe, V.H., Mazuma, E.D.L., Bokosi, J. and Kazira, E. 2014. Release of cowpea line IT99k-494-6 for yield and resistance to the parasitic weed, *Alectra vogelii* Benth. in Malawi. African Journal of Plant Science 8(4): 196-203. [Four *Alectra*- resistant cowpea lines from IITA, IT98K-503-1, IT97K-825-15, IT99K-7-21-2-2-1 and IT99K-494-6, tested in Malawi. IT99K-494-6 selected as best agronomically and released in Malawi, and regarded as particularly valuable where *Striga asiatica* is also a problem and cowpea is grown as a rotational trap crop.]

Kamara, A.Y., Ekeleme, F., Jibrin, J.M., Tarawali, G. and Tofa, I. 2014. Assessment of level, extent and factors influencing *Striga* infestation of cereals and cowpea in a Sudan Savanna ecology of northern Nigeria. Agriculture, Ecosystems & Environment 188: 111-121. [A survey in Jigawa State, showed that the severity of *S. hermonthica* attack on sorghum and millet was high in all the communities studied. Also, most cowpea plants in fields surveyed in most communities were attacked by *S. gesnerioides*. Field infestation was largely related to poor soil fertility.]

Kamara, A.Y., Ewansiha, S.U. and Menkir, A. 2014. Assessment of nitrogen uptake and utilization in drought tolerant and *Striga* resistant tropical maize varieties. Archives of Agronomy and Soil Science 60(2): 195-207. [Suggesting that drought-tolerant cultivars are more responsive to N than controls. Response of *Striga*-resistant cultivars not clear from abstract.]

Kamble, V.R. and Agre, D.G. 2013. New report on AMF colonization in root parasite *Striga gesnerioides* and its host *Lepidagathis hamiltoniana* from high altitude region of Maharashtra. International Multidisciplinary Research Journal 3(2): 27-31. [Confirming the presence of arbuscular mycorrhizal fungi in the roots of both *S. gesenerioides* and its host, *L. hamiltoniana.* Species detected included *Gigaspora* spp., *Glomus epigaeum*, *G. occulatum* and *G. macrocarpum*, the latter being the most abundant.]

Kannan, C. and Zwanenburg, B. 2014. A novel concept for the control of parasitic weeds by decomposing germination stimulants prior to action. Crop Protection 61: 11-15. [Demonstrating that aqueous solutions of either borax or thiourea rapidly decompose typical strigolactone analogues, including GR 24 and Nijmegen-1, within an hour, suggesting a possible means of control in the field.]

Karanja, J., Nguluu, S.N., Wambua, J. and Gatheru, M. 2013. Response of cowpea genotypes to *Alectra vogelii* parasitism in Kenya. African Journal of Biotechnology 12(47): 6591-6598. [Cowpea yield losses due to *A. vogelii* have been estimated to range from 50 to 100% in Mbeere, Kitui and Makueni districts. Among 123 lines tested, Kir/Nya-005 and Mbe/Mach-022 showed complete resistance to *Alectra*. Sia/Cia-004, Mbe/Mach-014 and Kib-006 were tolerant giving high grain yields despite heavy infestation.]

Karaya, H., Njoroge, K., Mugo, S., Ariga, E.S., Kanampiu, F. and Nderitu, J. 2014. Combining ability of maize (*Zea mays*) inbred lines resistant to *Striga hermonthica* (Del.) Benth evaluated under artificial *Striga* infestation. African Journal of Agricultural Research 9(16): 1287-1295. [Results suggest a predominance of additive gene effects in the inheritance of *Striga* resistance traits as opposed to dominance gene effects. Inbred lines with good GCA for yield and resistance traits were identified as TESTR 151, TESTR 156 and OSU231//56/44-6-4-17-3.]

Kareji, A.E. 2013. Evaluation of herbal drugs used to treat fungal and bacterial diseases in Mbeere, Eastern Kenya. International Journal of Herbal Medicine 1(4): 85-87. [*Osyris abyssinica* the commonest treatment for pneumonia.]

Khalil, N.A.A., Dagash, Y.M. and Yagoub, S.O. 2013. Effect of sowing date, irrigation intervals and fertilizers on safflower (*Carthamus tinctorius* L.) yield. Discourse Journal of Agriculture and Food Sciences 1(5): 97-102. [Results were incidentally affected by serious infection of safflower with *Orabanche crenata* which was the first record in Sudan.]

Khan, M.S., Mhaveer Singh, Khan, M.A. and Sayeed Ahmad. 2014. Protective effect of *Santalum album* on doxorubicin induced cardiotoxicity in rats. World Journal of Pharmaceutical Research 3(2): 2760-2771. [The antioxidant effect of *S. album* is shown to decrease doxorubicin-induced cardiotoxicity.]

Khan, R.U., Khan, S.U., Sultan Mehmood, Ihsan Ullah and Aziz Khan. 2013. Study of chemical constituents and medicinal uses of indicator species of District Bannu. International Journal of Herbal Medicine 1(2): 59-80. [Listing *Cuscuta reflexa* among the commonest medicinal plants in the Bannu district of Pakistan.]

Khan, Z.R., Midega, C.A.O., Pittchar, J.O., Murage, A.W., Birkett, M.A., Bruce, T.J.A. and Pickett, J.A. 2014. Achieving food security for one million sub-Saharan African poor through push-pull innovation by 2020. In: Poppy, G. Jepson, P. Pickett, J., Birkett, M. (eds) Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences 369(1639): 20120284. [A very detailed review of the 'push-pull' concept, its control of stalk-borer and *Striga* spp., and the plans for its development and dissemination. Also noting the value of the drought-tolerant *Desmodium intortum* in place of *D. uncinatum* for drier conditions.]

Kim, H.I., Kisugi, T., Khetkam, P., Xie, X,, Yoneyama, K., Uchida, K., Yokota, T., Nomura, T., McErlean, C.S. and Yoneyama, K. 2014. Avenaol, a germination stimulant for root parasitic plants from Avena strigosa. *Phytochemistry* 103: 85-8. [Root exudates from the *Avena strigosa* yielded 6 new germination stimulants but no known strigolactones. One with the structure 5-((E)-(5-(3-hydroxy-1,5,5-trimethyl-2-oxobicyclo[4.1.0]heptan-7-yl)-2-oxodihydrofuran-3(2H)-ylidene)methoxy)-3-methylfuran-2(5H)-one is named avenaol which contains the C-D moiety common to strigolactones, but lacks the B ring and has an additional carbon atom between the A and C rings. Avenaol is a potent stimulant for *Phelipanche ramosa* but only a weak stimulant for *Striga hermonthica* and *Orobanche minor*.]

Kirigia, D., Runo, S. and Alakonya, A. 2014. A virus-induced gene silencing (VIGS) system for functional genomics in the parasitic plant *Striga hermonthica*. Plant Methods 10(June 3): 16 pp. [Demonstrating that the VIGS system based on tobacco rattle virus works in *S. hermonthica* and can be used for candidate gene validation for their role in the parasite's development and parasitism, with the ultimate goal of developing resistant transgenic maize.]

Klutsch, J.G., Beam, R.D,, Jacobi, W.R. and Negrón, J.F. 2014. Bark beetles and dwarf mistletoe interact to alter downed woody material, canopy structure, and stand characteristics in northern Colorado ponderosa pine. Forest Ecology and Management 315: 63-71. [Discussing interactions between *Arceuthobium vaginatum* subsp. *cryptopodum*, mountain pine beetles *Dendroctonus ponderosae* and *Ips* spp. and their effects on *Pinus ponderosa*.]

Kołodziejek, J. and Kołodziejek, A. 2013. The spatial distribution of pine mistletoe *Viscum album* ssp. *austriacum* (Wiesb.) Volmann in a Scots pine (*Pinus sylvestris* L) stand in central Poland. Polish Journal of Ecology 61(4): 705-714. [A survey of *V. album* in Scots pine showed 46% trees infected, including 3% severely. Parasitized trees were more prevalent in low-density stands than in high-density stands. Mistletoes occurred mainly on the outer brunches within trees crowns.]

Konan, K., David, N.J., Souleymane, M., Ahoua, Y., Félix, Y.H. and Joseph, D.A. 2013. *In vitro* antioxidant activity and phenolic contents of the leaves of *Olax subscorpioidea* and

Distemonanthus benthamianus. Research Journal of Pharmaceutical, Biological and Chemical Sciences 4(4): 1419-1430. [Confirming antioxidant activity in *O. subscorpiodea*, used medicinally in Cote d'Ivoire.]

Kong XiangPei, Zhang MaoLin and Ding ZhaoJun. 2014. D53: the missing link in strigolactone signaling. Molecular Plant 7(5): 761-763. [A study of some new structures with strigolactone activity. They possess a common dimethylbutenolide motif but their structure varies in the ABC part of the molecules: one, '23' has the same ABC part as GR24, while '31' and AR36 carry, respectively, an aromatic ring and an acyclic carbon chain.]

Konstantinovic´, B., Blagojevic´, M., Konstantinovic´, B. and Samardžic´, N. 2013. (Control of weed flora in nursery production of tree seedlings of ornamental plants.) (in Serbian) Biljni Lekar (Plant Doctor) 41(6): 663-671. [*Cuscuta campestris* among weed species in a woody plant nursery.]

Kosic´, I.V. and Britvec, M. 2014. (Floristic and vegetation characteristic of forest edges and grasslands of C´ic´arija (Croatia).) (in Croatian) Šumarski List 138(3/4): 167-184. [Noting the presence in 'used meadows' of *Orobanche minor*, and *Rhinanthus aristatus*.]

Kouakou, C.K., Akanvou, L., Zoro Bi, I.A., N'Da, H.A. and Akanvou, R. 2014. The use of genetically tolerant maize (*Zea mays* L.) in the control of *Striga hermonthica* in Northern Côte d'Ivoire. American Journal of Experimental Agriculture 4(5): 563-574. [The yield of the *Striga*-tolerant IWD STR was reduced up to 60% by a range of 6 strains of *S. hermonthica* but were still 50% higher than the susceptible variety. Northern strains of *S. hermonthica* were more virulent than southern strains but strains from millet, sorghum or maize were equally tolerated.]

Kountche, B. A., Hash, C.T., Dodo, H., Laoualy, O., Sanogo, M.D., Timbeli, A., Vigouroux, Y., This, D., Nijkamp, R. and Haussmann, B.I.G. 2013. Development of a pearl millet *Striga*-resistant genepool: response to five cycles of recurrent selection under *Striga*-infested field conditions in West Africa. Field Crops Research 154: 82-90. [Indicating moderate progress in the development of a *Striga*-resistant gene pool.]

Kuijt, J. 2013. A brief taxonomic history of neotropical mistletoe genera, with a key to the genera. Blumea 58(3): 263-266. [Contains the author's perspective on the taxonomic history of Loranthaceae, Viscaceae, and the eremolepidaceous mistletoes (Misodendraceae not discussed). The key is the first published that incorporates all the small-flowered X=8 neotropical Loranthaceae genera, including the recently resurrected genera *Peristethium* and *Passovia*.]

Kumar, A.M. 2014. Recurrence of sandal spike disease in Karnataka - an alert. Current Biotica 7(4): 253-255. [Reviewing the occurrence of this phytoplasma disease in sandal (presumably *Santalum album*) in Karnataka.]

Kumar, K.N.S., Sangeetha, B., Rajalekshm, M., Ravishankar, B., Muralidhar, R. and Yashovarma, B. 2103. Pharmacognostical and phytochemical studies on dyer's oleander mistletoe, *Viscum orientale* Willd. Indian Journal of Natural Products and Resources 4(3): 260-269.

*Kuonen, R., Weissenstein, U., Urech, K., Kunz, M., Hostanska, K., Estko, M., Heusser, P. and Baumgartner, S. 2013. Effects of lipophilic extract of *Viscum album* L. and oleanolic acid on migratory activity of NIH/3T3 fibroblasts and on HaCat keratinocytes. Evidence-based Complementary and Alternative Medicine 2013: Article ID 718105. (http://www.hindawi.com/journals/ecam/2013/718105/) [Results support the observation that *V. album* lipophilic extract might modulate wound healing related processes *in vivo*.]

Kurt, G. and Tepe, I. 2014. (Determination of seed dispersal mechanisms of smoothseed alfalfa dodder (*Cuscuta approximata* Bab.) in Van.) (inTurkish) Yüzüncü Yil Üniversitesi Journal of Agricultural Sciences 24(1): 51-59. [Recording over 6000 seeds of *C. approximata* 100 g of alfalfa seeds, over 500 seeds in 100 g of manure, and an average of 21 seeds in 4 kg of soil, confirming crop seed as the main means of spread but manure also important.]

Kwaga, Y.M. 2013. Direct and indirect contributions of yield attributes to the kernel yield of groundnut (*Arachis hypogaea* L.) grown under *Alectra* infestation at Samaru, Nigeria. American-Eurasian Journal of Agricultural & Environmental Sciences 13(12): 1622-1625. [In a 1999 study, the number of pods per plant exhibited the highest percentage yield contribution to kernel yield.]

Lall, N. and Kishore, N. 2014. Are plants used for skin care in South Africa fully explored? Journal of Ethnopharmacology 153(1): 61-84. [*Ximenia americana* among species for treatment of skin hyperpigmentation problems.]

Lawrence, J.F. and Slipinski, A. 2013. *Loranthophila*, a new genus of Australian Lyctinae (Coleoptera: Bostrichidae) associated with mistletoe. Zootaxa 3737(3): 295-300. [The new genus *Loranthophila* is described, based on *Minthea acanthacollis* in the bostrichid subfamily Lyctinae. The mistletoe is not specified.]

LeBlanc, M., Kim, G.J., Patel, B., Stromberg, V. and Westwood, J. 2013. Quantification of tomato and *Arabidopsis* mobile RNAs trafficking into the parasitic plant *Cuscuta pentagona*. New Phytologist 200(4): 1225-1233. [Proposing that mRNAs traffic into *C. pentagona* via multiple routes, or that other mechanisms for selective uptake and mobility exist between host and parasite.]

Le Corre, V., Reibel, C. and Gibot-Leclerc, S. 2014. Development of microsatellite markers in the branched broomrape *Phelipanche ramosa* L. (Pomel) and evidence for host-associated genetic divergence. International Journal of Molecular Sciences 15(1): 994-1002. [Individuals collected on oilseed rape were strongly differentiated from individuals collected on hemp or tobacco, suggesting that *P. ramosa* infecting oilseed rape forms a genetically diverged race.]

Lee ShinHae,Kim InBo, Kim JongBae, Park DongHo and Min KyungJin. 2014. The effects of Korean mistletoe extract on endurance during exercise in mice. Animal Cells and Systems 18(1): 34-40. [*Viscum album* ssp. *coloratum* enhances the exercise performance in a sedentary mouse group, but did not further enhance it when combined with exercise training, suggesting that it could be an excellent mimetic of exercise.]

Li Ying, Hess, C., von Wehrden, H., Härdtle, W. and van Oheimb, G. 2014. Assessing tree dendrometrics in young regenerating plantations using terrestrial laser scanning. Annals of Forest Science 71(4): 453-462. [The understory apparently included some Orobanchaceae, but no detail in abstract.]

Liao Kuo, Gituru, R.W., Guo YouHao and Wang QingFeng. 2013. Effects of floral herbivory on foraging behaviour of bumblebees and female reproductive success in *Pedicularis gruina* (Orobanchaceae). Flora (Jena) 208(10/12): 562-569. [Noting substantial reduction in pollination of *P. gruina* in Germany by bees following damage by herbivores

Liu MinLu, Yu WenBin and Wang Hong. 2013. Rapid identification of plant species and iFlora: application of DNA barcoding in a large temperate genus *Pedicularis* (Orobanchaceae). Plant Diversity and Resources 35(6): 707-714. [Using *Pedicularis* spp., the results showed that species identification rates using the nuclear ITS locus surpassed those of the three chloroplast barcodes and all combinations of barcodes.].

Liu Qing, Zhang YanXia, Matusova, R., Charnikhova, T., Amini, M., Jamil, M., Fernandez-Aparicio, M., Huang, K., Timko, M.P., Westwood, J.H., Ruyter-Spira, C. van der Krol, S. and Bouwmeester, H.J. 2014. *Striga hermonthica MAX2* restores branching but not the Very Low Fluence Response in the *Arabidopsis thaliana max2* mutant. New Phytologist 202(2): 531-541. [Results provide indirect evidence for *ShMAX2* functions in *Striga*. A putative role of *ShMAX2* in strigolactone-dependent seed germination of *Striga* is discussed.]

Manish Mathur and Govind Vyas. 2013. Role of nanoparticles for production of smart herbal drug - an overview. Indian Journal of Natural Products and Resources 4(4): 329-338. [Referring to improved hepatoprotective and antioxidant performance from nanonised formulation of *Cuscuta chinensis*.]

*Mansky, P.J., Wallerstedt, D.B., Sannes, T.S., Stagl, J., Johnson, L.L., Blackman, M.R., Grem, J.L., Swain, S.M. and Monahan, B.P. 2013. NCCAM/NCI phase 1 study of mistletoe extract and gemcitabine in patients with advanced solid tumors. Evidence-based Complementary and Alternative Medicine 2013: Article ID 964592. (http://www.hindawi.com/journals/ecam/2013/964592/) [Concluding that gemcitabine plus a *Viscum album* extract is well tolerated. No botanical/drug interactions were observed. Clinical response is similar to gemcitabine alone.]

Mapongmetsem, P.M. and Diksia, M. 2014. Vegetative propagation of local fruit trees by air layering in the Guinean Savannah Highlands (GSH). Journal of Sustainable Forestry 33(1): 21-32. [Reporting that rooting of layered *Ximenia americana* was lower than for some other woody species.]

Masciadri, S., Stutz, S. and García-Rodríguez, F. 2013. Modern pollen-vegetation relationship of plant communities in the Uruguayan Atlantic coast. Brazilian Journal of Botany 36(1): 31-44. [In a study of pollen capture by lakes (as a guide to palaeo studies), *Tripodanthus acutifolius* (Loranthaceae) was among good indicators of the coastal forest.]

Mavundza, E.J., Maharaj, R., Chukwujekwu, J.C., Finnie, J.F. and van Staden, J. 2013. Larvicidal

activity against *Anopheles arabiensis* of 10 South African plants that are traditionally used as mosquito repellents. South African Journal of Botany 88: 86-89. [The bark extract of *Olax dissitiflora* exhibited the highest larvicidal activity and may have the potential to be used as a larvicide against *A. arabiensis.*]

Mayor, J.R., Wright, S.J, and Turner, B.L. 2014. Species-specific responses of foliar nutrients to long-term nitrogen and phosphorus additions in a lowland tropical forest. Journal of Ecology (Oxford) 102(1): 36-44. [*Heisteria concinna* (Olacaceae) included in a long-term study in Panama.]

Medeiros, A.C., von Allmen, E.I. and Chimera, C.G. 2014. Dry forest restoration and unassisted native tree seedling recruitment at Auwahi, Maui. Pacific Science 68(1): 33-45. [*Santalum ellipticum* and *S. haleakalae* among species of concern, requiring conservation management.]

Mehrvarz, S.S., Panah, S.P. and Faghir, M.B. 2013. A palynological study of the genus *Pedicularis* (*Orobanchaceae*) in Iran. Willdenowia 43(2): 279-285. [Describing the pollen of *P. cabulica*, *P. caucasica*, *P. condensata*, *P. pycnantha*, *P. rechingeri*, *P. rhinanthoides*, *P. sibthorpii*, *P. straussii* and *P. wilhelmsiana* and noting characters useful in identification.]

Mendonça, A.V.R., Souza, J.S., Giulietti, A.M. and van den Berg, C. 2013. (Estimation of biomass air caatinga north of Bahia.) (in Portuguese) Pesquisa Florestal Brasileira 33(76): 355-368. [Including methods for estimation of biomass of *Ximenia americana* in the caatinga type forest in Brazil.]

Méri, Á. and Karsai, J. 2013. Modelling the spatial and temporal dispersal of *Cuscuta europea* (Cuscutaceae). Polish Journal of Ecology 61(4): 811-817. [Studying the spatial patterns of *Cuscuta* species and presenting the results of field observations and mathematical models.]

Miao ZhongQin, Liu HaiHong, Jia JunZhen and Guo YuHai, 2014. (Developmental and anatomical studies on *Cistanche tubulosa* seedling.) (in Chinese) Journal of China Agricultural University 19(2): 131-136. [Describing the processes involved in penetration of the *C. tubulosa* haustorium.]

Midega, C.A.O., Salifu, D., Bruce, T.J., Pittchar, J., Pickett, J.A. and Khan, Z.R. 2014. Cumulative effects and economic benefits of intercropping maize with food legumes on *Striga hermonthica* infestation. Field Crops Research 155: 144-152. [Field work in Kenya comparing 5 potential legume intercrops with *Desmodium intortum*. Groundnut reduced *Striga* but failed to increase yield. Crotalaria and greengram intercrops reduced *Striga*. and increased yields to a lesser extent than *D. intortum*, which gave the highest economic return, but they could be of value as part of an integrated approach.]

Miladinovic, D.L., Ilic, B.S., Nikolic, D.M., Markovic, M.S., Nikolic, N.D., Miladinovic, L.C. and Miladinovic, M.D. 2013. Volatile constituents of *Euphrasia stricta*. Chemistry of Natural Compounds 49(6): 1146-1147. [Recording iridoids, phenolic acids, phenylpropane, and flavonoid glycosides in *E. stricta*, used traditionally for eye problems in Serbia.]

Mildenhall, D.C., Kennedy, E.M., Lee, D.E., Kaulfuss, U., Bannister, J.M., Fox, B. and Conran, J.G. 2014. Palynology of the early Miocene Foulden Maar, Otago, New Zealand: diversity following destruction. Review of Palaeobotany and Palynology 204: 27-42. [Mistletoes, including several species of Loranthaceae were present.]

Misra, B.B. and Satyahari Dey. 2013. Quantitative and qualitative evaluation of esquiterpenoids from essential oil and *in vitro* somatic embryos of east Indian Sandalwood (*Santalum album*) tree by HPTLC and GC. Open Access Journal of Medicinal and Aromatic Plants (OAJMAP) 4(1): 1-9. [Meaning sesquiterpenoids?]

*Misra, B.B. and Satyahari Dey, 2014. Culture of East Indian sandalwood tree somatic embryos in air-lift bioreactors for production of santalols, phenolics and arabinogalactan proteins. AoB Plants 2013, plt025. (http://aobpla.oxfordjournals.org/content/5/plt025.full) [Results indicate that 10-L-capacity air-lift bioreactors are capable of supporting somatic embryo cultures of *Santalum album*, while the extracellular medium provides opportunities for production of industrial raw materials such as santalols, phenolics and arabinogalactan proteins.]

Mohapatra, H. K and; Behera, L.M. 2014. Angiosperms affected with *Dendrophthoe falcata* (L.f.) Ettingsh in Deogarh District of Odisha. Advances in Plant Sciences 27(1): 115-117. [Recording 29 dicot host species belonging to 29 genera and 20 families.]

Molina, J. and 16 others. 2014. Possible loss of the chloroplast genome in the parasitic flowering plant *Rafflesia lagascae* (Rafflesiaceae). Molecular Biology and Evolution 31(4): 793-803. [Illumina whole genome sequencing was used to generate a sequence which was assembled into a draft mitochondrial genome. Only fragments of plastid genes were detected

and one third of these were derived from the host via horizontal gene transfer. These data suggest *Rafflesia* lacks a plastid genome or, if it is present, it is in cryptic form at very low levels.]

Molinero-Ruiz, L., García-Carneros, A.B., Collado-Romero, M., Raranciuc, S., Domínguez, J., and Melero-Vara, J.M. 2014. Pathogenic and molecular diversity in highly virulent populations of the parasitic weed *Orobanche cumana* (sunflower broomrape) from Europe. Weed Research (Oxford) 54(1): 87-96. [Analyses of *O. cumana* populations confirmed race F present in Spain, Hungary and Turkey and race G also in Turkey. Populations within South Spain, Central Spain, Hungary and Turkey were each genetically uniform.]

Montejo Valdés, L A., Muñoz, B.C., Sánchez, J.A. and Gamboa, A. 2014. (Seed variability among plant species from a tropical evergreen forest in Sierra del Rosario, Cuba.) (in Spanish) Bosque 35(1): 37-47. [Undeveloped embryos of rudimentary types, linear or capitate, were found in *Schoepfia didyma* (Olacaceae).]

*Morawetz, J.J. 2013 A clearing protocol for whole tissues: an example using haustoria of Orobanchaceae. Applications in Plant Sciences 1(1): 1200361. (http://www.bioone.org/doi/full/10.3732/apps.1200361) [Stockwell's bleach proved to be useful in removing tannins from haustoria within 3-10 days, after which they were successfully cleared in a solution of lactic acid saturated with chloral hydrate at 42°C.]

Moupela, C., Doucet, J.L., Daïnou, K., Tagg, N., Bourland, N. and Vermeulen, C. 2014. Dispersal and predation of diaspores of *Coula edulis* Baill. in an evergreen forest of Gabon. African Journal of Ecology 52(1): 88-96. [Camera-trap photographs have shown 7 animal species involved in the dispersal/predation of *C. edulis* (Olacaceae), bush pig being the main consumer and predator of seeds. No seeds emerged intact from elephant faeces.]

Mudrák, O., Mládek, J., Blažek, P., Lepš, J., Doležal, J., Nekvapilová, E. and Těšitel, J. 2014. Establishment of hemiparasitic *Rhinanthus* spp. in grassland restoration: lessons learned from sowing experiments. Applied Vegetation Science 17(2): 274-287. [Concluding from a range of field studies in the Czech Republic that mowing or grazing, litter removal, proper timing of sowing, and use of the seeds from local seed sources should considerably increase probability of the successful introduction of *Rhinanthus*.]

Muhammad Qaiser, Anjum Perveen and Tahmeena Siddiqui. 2014. Pollen morphology of the genus *Euphrasia* L. (Orobanchaceae) from Pakistan and Kashmir and its taxonomic significance. Plant Systematics and Evolution 300(3): 483-492. [On the basis of a study of exine ornamentation in 25 *Euphrasia* spp., three distinct pollen types viz., *E. foliosa*, *E. multiflora*, and *E. incisa* are recognized.]

Muniappan Ayyanar, Savarimuthu Ignacimuthu and Houghton, P.J. 2014. Threat status of medicinal plants used by the tribal people in Kalakad Mundanthurai Tiger Reserve, Southern Western Ghats, India. Proceedings of the National Academy of Sciences India. Section B, Biological Sciences 84(2): 419-429. [Noting the urgent need for conservation of plants used in traditional medicine; *Santalum album* among those 'red-listed'.]

Munro, K.C., Jackson, J.R.M., Hartling, I., Sumner, M.J. and Friedman, C.M.R. 2014. Anther and pollen development in the lodgepole pine dwarf mistletoe (*Arceuthobium americanum*) staminate flower. Botany 92(3): 203-214. [A detailed desription of the development and morphology of pollen in *A. americanum*.]

Musselman, L.J. 2013. Cow wheat. Chinquapin. The Newsletter of the Southern Appalachian Botanical Society 21 (2): 9. [*Melampyrum lineare*]

Musselman, L.J. 2013. Senna Seymeria. Chinquapin. The Newsletter of the Southern Appalachian Botanical Society 21(4): 27. [Describing *Seymeria cassioides*, which can cause severe damage to pine species in USA, and the less common *S. pectinata* which has a wider host range.]

Musselman, L.J. 2014. *Cassytha filiformis*: Dodder Laurel or Devil's Gut. Chinquapin. The Newsletter of the Southern Appalachian Botanical Society 22(1):3. [*C. filiformis* occurs in Florida and Texas.]

Musselman, L.J. 2014. The empress of root parasites *Macranthera flammea*. Chinquapin. The Newsletter of the Southern Appalachian Botanical Society 22(2):11. [A rare Gulf Coast endemic with large hummingbird-pollinated flowers.]

Naik Raghavendra, Sneha, D.B., Harisha, C.R. and Acharya, R.N. 2013. A detailed pharmacognostical evaluation on leaf of *Olax scandens* Roxb. Global Journal of Research on Medicinal Plants and Indigenous Medicine 2(4): 246-253. [Leaves of *O. scandens* are edible and used for cure of headaches in India.].

Napier, K.R., Mather, S.H., McWhorter, T.J. and Fleming, P.A. 2014. Do bird species richness and community structure vary with mistletoe flowering and fruiting in Western Australia? Emu - Austral Ornitholog 114(1): 13-22. [Mistletoebirds (*Dicaeum hirundinaceum*) were significantly more likely to be recorded during months when ripe fruit of *Amyema preissii* and *A. miquelii* were present and the overall bird species richness was higher for these survey months.]

Nardella, E., Gatta, G. and Giuliani, M.M. 2014. (Water stress on tomato, a high risk of low yields.) (in Italian) Informatore Agrario 70(12): 69-72. [Commenting that results were influenced by a dense infestation of *Orbanche ramosa* which is spreading fast in Foggia province.]

Ndagurwa, H.G.T. and Dube, J.S. 2013. Evaluation of potential and effective rumen digestion of mistletoe species and woody species browsed by goats in a semi-arid savanna, southwest Zimbabwe. Animal Feed Science and Technology 186(1/2): 106-111. [*Erianthemum ngamicum*, *Plicosepalus kalachariensis* and *Viscum verrucosum* show a high nutritive value with potential for feeding goats, superior to that of their *Acacia* spp. hosts.]

Ndagurwa, H.G.T., Dube, J.S. and Mlambo, D. 2014. The influence of mistletoes on nutrient cycling in a semi-arid savanna, southwest Zimbabwe. Plant Ecology 215(1): 15-26. [Confirming that *Erianthemum ngamicum*, *Plicosepalus kalachariensis*, and to a lesser extent *Viscum verrucosum* in Zimbabwe significantly increase litterfall and soil nutrients under the host tree *Acacia karroo*.]

Neetu Bais, Arun Kakkar, Mishra, V.K., Rajendra Singh and Prachi Khare. 2014. Comparative study on antibacterial activity of ethyl acetate extract of *Cuscuta reflexa* grown on *Cassia fistula* and *Ficus benghalensis*. International Journal of Pharmaceutical Sciences and Research (IJPSR) 5(1): 137-141. [Extracts from *C. reflexa* grown on the two host species were effective against most of the bacteria tested but that grown on *Ficus* was inactive against *Salmonella typhi* while that grown on *Cassia* was inactive against *Escherichia coli*.]

*Nemati, F., Dehpouri, A.A., Eslami, B., Mahdavi, V. and Mirzanejad, S. 2013. Cytotoxic properties of some medicinal plant extracts from Mazandaran, Iran. Iranian Red Crescent Medical Journal 15(11): e8871. (http://ircmj.com/?page=article&article_id=8871) [Extacts of *Orobanche orientalis* inferior to those of several others.]

Niasati, M., Palizdar, M.H., Pourelmi, M.R. and Pasha, C.H. 2014. Effect of methanolic extract of *Viscum album* on *in vitro* fermentation and digestibility of soybean meal. Research Opinions in Animal and Veterinary Sciences 4(7): 411-415.

Nikolov, L.A., Endress, P.K., Sugumaran, M., Sasirat, S., Vessabutr, S., Kramer, E.M. and Davis, C.C. 2013. Developmental origins of the world's largest flowers, Rafflesiaceae. Proceedings of the National Academy of Sciences of the United States of America 110(46): 18578-18583. [Comparative studies of structure, development, and gene-expression patterns were used to investigate the homology of floral organs in Rafflesiaceae. The diaphragm in *Rafflesia* is derived from the petal whorl whereas in *Sapria* it develops from a ring structure located between the perianth and the stamen whorl; thus these tissues are not homologous.]

Nikolov, L., Staedler, Y., Manickam, S., Schönenberger, J., Endress, P., Kramer, E. and Davis, C.C. 2014. Floral structure and development in Rafflesiaceae with emphasis on their exceptional gynoecia. American Journal of Botany 101: 225–243. [Serial sectioning, SEM, and x-ray tomography of floral buds were employed to study the structure and development of all three Rafflesiaceae genera. The shoot apex of Rafflesiaceae forms secondarily via internal cell separation (schizogeny) along the distal boundary of the host-parasite interface. Similarly, the clefts of the gynoecium form via schizogeny within solid tissue, and no carpels are initiated from the floral apex. Secondary derivation of the inner gynoecium surface is otherwise unknown in angiosperms.]

Nikolov, L., Tomlinson, P., Manickam, S., Endress, P., Kramer, E. and Davis, C. 2014. Holoparasitic Rafflesiaceae possess the most reduced endophytes and yet give rise to the world's largest flowers. Annals of Botany 114: 233-242. [Serial sectioning and staining were employed to characterize the structure of the endophytes in *Rafflesia*, *Sapria* and *Rhizanthes*. The endophyte consists of uniseriate filaments oriented radially within the host. A protocorm then forms an endogenously originating shoot apex by formation of a secondary morphological surface.]

Nobis, M., Nowak, A., Nobis, A., Paszko, B., Piwowarczyk, R., Nowak, S. and Plášek, V.

2014. Contribution to the flora of Asian and European countries: new national and regional vascular plant records. Acta Botanica Gallica 161(1): 81-89. [Reporting new records for *Orobanche ritro* from Ukraine and Russia, with illustrations.]

Norliette, Z.S.H., Emile, A.C., Bassiaka, O., Achille, A. and Adam, A. Brice, S. 2013. *Rhamphicarpa fistulosa* in lowland rice production in Africa: a review. Advances in Environmental Biology 7(14): 4567-4572. [A general review.]

Noutcheu, R., Tchatat, M., Mony, R., Mokake, E.S., Taffouo, V.D. and Dibong, S.D. 2013. Phenology, parasitism of *Phragmanthera capitata* and myrmecofauna associated to host trees at the orchard of the chief's palace Ndogbong (Douala, Cameroon). Agriculture and Biology Journal of North America 4(5): 539-551. [*P. capitata* recorded in a range of hosts including *Citrus sinensis*, guava and cacao which suffer serious damage from the parasite. *Tapinanthus preussii* and *Phragmanthera batanga* also occurred on cacao at a low level. The study established that the commonest ant species *Crematogaster decracrema* caused marked reduction in flowering of *P. capitata* and could be considered as a biocontrol agent.]

Okada, S., Zhou XueRong, Damcevski, K., Gibb, N., Wood, C., Hamberg, M. and Haritos, V.S. 2013. Diversity of Δ12 fatty acid desaturases in Santalaceae and their role in production of seed oil acetylenic fatty acids. Journal of Biological Chemistry 288(45): 32405-32413. [Studies on *Exocarpos cupressiformis* and *Santalum acuminatum* suggest that fatty acid desaturases with promiscuous and unique activities have been identified in Santalaceae and explain the origin of some of the unusual lipids found in this plant family.]

Okubamichael, D.Y., Griffiths, M.E. and Ward, D. 2014. Reciprocal transplant experiment suggests host specificity of the mistletoe *Agelanthus natalitius* in South Africa. Journal of Tropical Ecology 30(2): 153-163. [*A. natalitius* grows on both *Acacia karroo* and *A. caffra*. In reciprocal transplant experiments, initial germination was normal on both host and non-host species, but development and survival was lower on non-hosts.suggesting adaptation of the mistletoe to the most frequently encountered host species.]

Oldham, K. 2014. Geographical history and infraspecific morphological variation of the hemiparasitic wildflower American Cow-Wheat (*Melampyrum lineare*, Orobanchaceae). Chinquapin. The Newsletter of the Southern Appalachian Botanical Society 22(1): 1. [Report of a student project on *M. lineare* which parasitizes a range of forest species in eastern USA.]

*Oliveira, A.A., Segovia, J.F.O., Sousa, V.Y.K., Mata, E.C.G., Gonçalves, M.C.A., Bezerra, R.M., Junior, P.O.M. and Kanzaki, L.I.B. 2013. Antimicrobial activity of Amazonian medicinal plants. SpringerPlus 2(2): 371. (http://www.springerplus.com/content/2/1/371) [*Ptychopetalum olacoides* (Olacaceae) inhibited the growth of *Klebsiella ozaenae* and *Acinetobacter baumannii* to at least 40% the level of the antibiotic ciprofloxacin.]

Omeje, E.O., Khan, M.P., Osadebe, P.O., Tewari, D., Khan, M.F., Dev, K., Maurya, R. and Chattopadhyay, N. 2014. Analysis of constituents of the eastern Nigeria mistletoe, *Loranthus micranthus* Linn. revealed presence of new classes of osteogenic compounds. Journal of Ethnopharmacology 151(1): 643-651. [The study suggests a potential for *L. micrnathus* (= *Ileostylus micranthus*) (parasitising *Kola acuminata*, *Citrus* spp. and *Garcinia kola*) in the management of diseases where lack of bone formation is the pathology.]

Onuk, E.G., Ibrahim, H., Bello, M., Patrick, O. and Ibrahim, H. 2010. Socio-economic factors influencing the adoption of *Striga hermonthica* tolerant maize varieties among farmers in Panda development Area of Karu local government area, Nasarawa State. Nigerian Agricultural Journal 41(1): 46-51.

Oran, S.A. 2014. A list of flowering wild plants in Tafila Province, Jordan. International Journal of Biodiversity and Conservation 6(1): 28-40. [Noting the presence of *Ostris alba*.]

Paduch, R., Woz´niak, A., Niedziela, P. and Rejdak, R. 2014. Assessment of eyebright (*Euphrasia officinalis* L.) extract activity in relation to human corneal cells using *in vitro* tests. Balkan Medical Journal 31(1): 29-36. [Confirming the beneficial effects of application of ethanol and ethyl acetate extracts, of *E. officinalis* on cultured human corneal epithelial cells but finding the heptane extract to be toxic.]

Pan ShaoBin, Wang Xiao, Duan WenJuan, Yu ZongYuan, Zhang Lin and Liu Wei. 2014. Preparative isolation and purification of flavonoids from *Cuscuta chinensis* Lam. by high-speed countercurrent chromatography. Journal of Liquid Chromatography & Related Technologies 37(15): 2162-2171. [Five flavonoids, quercetin-3-O-β-D-apiofuranosyl-(1->2)-β-D-galactoside, hyperoside, kaempferol-3-O-β-D-glucoside, kaempferol, quercetin, and

chlorogenic acid isolated from the seeds of *C. chinensis*.]

Parker, C. 2014. The continuing threat from parasitic weeds. Outlooks on Pest Management 25(3): 237-242. [Here he goes again – trying to scare us into thinking parasitic weeds are important! Reviewing the on-going menace from spread and/or intensification of *Striga, Orobanche, Alectra, Cuscuta* and *Arceuthobium* spp. Nice pictures.]

Patel, P.K. 2013. *Cuscuta campestris* Yunck. (Cuscutaceae): a new species record from Gujarat State, India. Lifesciences Leaflets, 6(6): 55-58.

Patel, S. and Panda, S. 2014. Emerging roles of mistletoes in malignancy management. 3 Biotech 4(1): 13-20. [A general review, apparently relating mainly to *Viscum album*.]

Pelser, P.B. and Barcelona, J.F. 2013. Discovery through photography: *Amyema nickrentii*, a new species of Loranthaceae from Aurora Province, Philippines. Phytotaxa 125: 47–52. [*A. nickrentii* differs from all other described *Amyema* species in having a whorled leaf arrangement with mostly nine flat linear leaves per node. NB Congratulations to Dan on the second species to be named in his honour, the first being *Phoradendron nickrentii* (Kuijt, 2011, Novon 21:444-462).]

Pelser, P.B., Tandang, D.N., and Barcelona, J.F. 2014. *Balanophora coralliformis* (Balanophoraceae), a new species from Mt. Mingan, Luzon, Philippines. Phytotaxa 170(4): 291-295. [One of the most unusual species in the genus *Balanophora* is described. Its above-ground tubers look like coral owing to repeated branching of the elongated stem.]

Pereira, R.N., Delistoianov, N., Perotta, J.H., Magalhães, G.M., Favoretto, S.M. and Alessi, A.C. 2014. Catuama and bilobalide on peripheral nerve regeneration in rats following sciatic nerve section. Ciência Rural 44(5): 854-860. [*Ptychopetalum olacoides* (Olacaceae) is one of 4 components in 'Catuama', used in Brazil for its neuroprotector, anti-inflammatory, antioxidant and antidepressant effects. But not showing significant effect in this study.]

Petcu, E. and Joiţa-Păcureanu, M. 2012. The uses of wild species *Helianthus argophyllus* for obtaining sunflower germplasms with improved resistance to drought and broomrape infestation. Scientific Papers - Series A, Agronomy 55: 220-224. [Crosses between cultivated sunflower and *H. argophyllus* yielded progeny with promising resistance to *Orobanche cumana* races F and G.]

Pineda-Martos, R., Velasco, L. and Pérez-Vich, B. 2014. Identification, characterisation and discriminatory power of microsatellite markers in the parasitic weed *Orobanche cumana*. Weed Research (Oxford) 54(2): 120-132. [SSR markers showed high resolving power; UPGMA cluster analysis allowed proper classification of *Orobanche* spp. samples into species (*O. cumana* and *O. cernua*), geographical origin and host.]

Pop, C., Ranga, F., Fetea, F. and Socaciu, C. 2013. Application of three alternative technologies (spray drying, fluid bed drying and freeze drying) to obtain powdered formulas from plants with antimicrobial potential. Bulletin of University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca. Animal Science and Biotechnologies 70(1): 95-103. [Spray drying and freeze drying were superior to fluid bed as techniques for preparation of extracts including those from *Viscum album*.]

Pop, C., Vodnar, D., Ranga, F. and Socaciu, C. 2013. Comparative antibacterial activity of different plant extracts in relation to their bioactive molecules, as determined by LC-MS analysis. Bulletin of University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca. Animal Science and Biotechnologies 70(1): 86-94. [Extracts of *Viscum album* were active against *Escherichia coli*.]

Prabhakar, R. and Ramakrishna, H. 2014. Palynodiversity in the climbers of Adilabad district in Andhra Pradesh. Research Journal of Pharmaceutical, Biological and Chemical Sciences 5(3): 1873-1883. [*Cassytha filiformis* among species studied.]

Prajwal Paudel, Prabodh Satyal, Samjhana Maharjan, Nawal Shrestha and Setzer, W.N. 2014. Volatile analysis and antimicrobial screening of the parasitic plant *Cuscuta reflexa* Roxb. from Nepal. Natural Product Research 28(2): 106-110. [Activity of oil from *C reflexa* had negligible activity against *Bacillus cereus, Staphylococcus aureus, Escherichia coli* and *Pseudomonas aeruginosa*.and only marginal activity against *Aspergillus niger*.]

Prider, J. and Williams, A. 2014. Using dazomet to reduce broomrape seed banks in soils with low moisture content. Crop Protection 59: 43-50. [Pot and field studies in Australia confirmed the effectiveness of dazomet for control of *Orobanche ramosa* but noted that it took longer to be effective under drier conditions.]

*Priyanka Sharma, Aksha Sharma, Meera Agarwal and Joshi, S.C. 2013. A review on antifertility efficacy of plants in males. International Journal

of Pharma and Bio Sciences 4(4): P-413-P-428. (http://www.ijpbs.net/cms/php/upload/2730_pdf.pdf) [A review including mention of *Dwendrophthoe falcata.*]

Pujadas Salvà, A.J. 2013. (*Orobanche alsatica* (Orobanchaceae) in the Iberian Peninsula.) (in Spanish) Acta Botanica Malacitana 38: 155-159. [Presenting a description of *O. alsatica*, also known from Central and Eastern Europe.]

Pujadas Salvà, A.J. 2013. (*Orobanche icterica* and *O. ritro* (Orobanchaceae) in the Iberian Flora.) (in Spanish) Acta Botanica Malacitana 38: 160-162. [Presenting descriptions of *O. icterica* and *O. ritro* and highlighting their synonyms.]

Puneetha, G.K., Murali, M., Thriveni, M.C. and Amruthesh, K.N. 2014. Phytochemical screening, antioxidant and antibacterial properties of *Taxillus cuneatus* (Roth.) Danser - a hemi-parasitic angiosperm. International Journal of Current Microbiology and Applied Sciences 3(5): 702-711. [Assessing the range of active ingredients in *T. cuneatus* growing on *Spondias pinnata* and demonstrating antioxidant and reducing power activities.]

Quan JiShu, Jin MeiHua, Xu HuiXian, Qiu DeLai and Yin XueZhe. 2014. BRP, a polysaccharide fraction isolated from *Boschniakia rossica*, protects against galactosamine and lipopolysaccharide induced hepatic failure in mice. Journal of Clinical Biochemistry and Nutrition 54(3):181-189. [Results suggest that a polysaccharide fraction isolated from *B. rossica* alleviates galactosamine/lipopolysaccharide-induced liver injury by enhancing antioxidative defense system, suppressing inflammatory responses and reducing apoptotic signaling.]

Qin Shuai, Ge Huan and Zhao LiQing. 2014. (New data of vascular plants in Inner Mongolia.) (in Chinese) Acta Botanica Boreali-Occidentalia Sinica 34(2): 397-400. [*Cuscuta campestris* newly reprted from Inner Mongolia.]

Queijeiro-Bolaños, M., Cano-Santana, Z. and García-Guzmán, G. 2014. Incidence, severity, and aggregation patterns of two sympatric dwarf mistletoe species (*Arceuthobium* spp.) in Central Mexico. European Journal of Forest Research 133(2): 297-306. [Relating to *A. vaginatum* and *A. globosum*, both attacking *Pinus* spp.]

Raghavendra Naik, Borkar, S.D., Acharya, R.N. and Harisha, C.R. 2013. Development of random amplified polymorphic DNA markers for authentication of *Olax scandens* Roxb. Global Journal of Research on Medicinal Plants and Indigenous Medicine 2(7): 538-545. [*O. scandens* has food and medicinal uses in India.]

Rahmad, Z.B., Addo-Fordjour, P., Asyraf, M., Fadzly, N. and Rosely, N. 2014. Mistletoe abundance, distribution and associations with trees along roadsides in Penang, Malaysia. Tropical Ecology 55: 255-262. [1431 mistletoes in 5 species, 4 genera and 2 families were identified. These were found on 29 tree species belonging to 24 genera and 13 families. The most abundant species was *Scurrula ferruginia* (718 individuals) followed by *Dendrophthoe pentandra* (585 individuals).]

Raina, R.H., Saini, M.S. and Khan, Z.H. 2013. Population variation in *Bombus asiaticus* (Hymenoptera: Apidae) from northwest Indian Himalaya. Entomological News 123(5): 321-332. [*Pedicularis* spp. among hosts for *B. asiaticus*.]

Raya-Pérez, J.C., Ramírez-Pimentel, J.G., Covarrubias-Prieto, J., Acevedo-Lara, B. and Aguirre-Mancilla, C. 2014. Mineral and chlorophyll content of the *Psittacanthus calyculatus* (DC) G. Don hemiparasitic plant and four host trees. Revista Chapingo. Serie Ciencias Forestales y del Ambiente 20(1): 109-117. [Studying the contents of Mg, Al, Si, P, S, K, Ca, chlorophyll and protein in *P. calyculatus* and its hosts *Salix taxifolia*, *Ulmus divaricata*, *Fraxinus uhdei* and *Prosopis laevigata*. Noting particularly that the content of K in the parasite was at least double that in any of the hosts.]

*Raza, M.A., Rukhsana Kausar, Rana, F.A., Muhammad Danish, Durre Shahwar and Farwa Anwar. 2014. *Loranthus pulverulentus*: a potent source of natural antioxidants and alternative medicine. Journal of Chemistry 2013: Article ID 250739. (http://www.hindawi.com/journals/jchem/2013/250739/) [Analyses suggest that phenolic contents are the major constituents responsible for antioxidant activity.of *L. pulverulentus* (=*Scurrula pulverulenta*).]

Robertson, O., Maron, M., Buckley, Y. and McAlpine, C. 2013. Incidence of competitors and landscape structure as predictors of woodland-dependent birds. Landscape Ecology 28(10): 1975-1987. [Abundance of the noisy miner is more important than other factors, including unspecified mistletoe abundance, in the decline of woodland bird diversity.]

Rocha, D., Ashokan, P.K; Santhoshkumar, A.V., Anoop, E.V. and Sureshkumar, P. 2014. Influence of host plant on the physiological attributes of field-grown sandal tree (*Santalum album*). Journal of Tropical Forest Science 26(2): 166-172. [Concluding that *S. album* depended on the host *Casuarina equisetifolia*

mainly for maintaining plant water level and reducing water stress and the raised K status of the leaf played a significant role in this.]

*Rumpf, S.B., Semenchuk, P.R., Dullinger, S. and Cooper, E.J. 2014. Idiosyncratic responses of high Arctic plants to changing snow regimes. PLoS ONE 9(2): e86281. (http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0086281) [Reduced snow levels and earlier as well as later snowmelt had a negative effect on the average plant size of *Pedicularis hirsuta*.]

Rumsey, F. 2014, *Orobanche crenata* Forssk. (carnation-scented or bean broomrape) – a growing problem? BSBI News 125: 46-47. [An account of the outbreak of *O. crenata* in faba bean in UK last year with an outline of the previous history of the weed going back to 1950 in Essex, UK but not seen in that area since 2006 (until this year – see Update above).]

Sadananda, T.S., Govindappa, M. and Ramachandra, Y.L. 2013. Isolation and characterization of D-isolation and characterization of D-galactose, N-acetylgalactosamine, fructose, maltose specific lectin from eight different endophytic fungi of *Viscum album* L. Asian Journal of Biomedical and Pharmaceutical Sciences 3(26): 11-20. [Confirming the presence of lectins in *V. album* and in a range of endophytic fungi including *Aspergillus flavus*, *Fusarium moniliforme*, *F. oxysporum* and *Trichothecium* sp.,]

Sakulnarmrat, K., Srzednicki, G. and Konczak, I. 2014. Composition and inhibitory activities towards digestive enzymes of polyphenolic-rich fractions of Davidson's plum and quandong. LWT - Food Science and Technology 57(1): 366-375. [A polyphenolic-rich fraction from the fruits of quandong (*Santalum acuminatum*) comprising quercetin and cyanidin 3-glucoside, was the most effective inhibitor of pancreatic lipase.]

Sánchez, O.P. and Piepenbring, M. 2014. Species of *Uromyces* (Pucciniales, Basidiomycota) on Loranthaceae. Tropical Plant Pathology 39(2): 141-153. [Two new species, *Uromyces bahiensis* from Brazil and. *U. struthanthi* from Panama, described from unspecified Loranthaceae.]

Sanchez, P.M., Villarreal, M.L., Herrera-Ruiz, M., Zamilpa, A., Jiménez-Ferrer, E. and Trejo-Tapia, G. 2013. *In vivo* anti-inflammatory and anti-ulcerogenic activities of extracts from wild growing and *in vitro* plants of *Castilleja tenuiflora* Benth. (*Orobanchaceae*). Journal of Ethnopharmacology 150(3): 1032-1037. [Verbascoside in extracts of *C. tenuiflora* provided significant gastric protection in an acute ulcer induction model and topical anti-inflammatory activity in a mouse ear edema model helping to explain the traditional use of *C.tenuiflora* in the treatment of anti-inflammatory and gastrointestinal disorders in Mexican traditional medicine. Also showing that active extracts could be produced in cultured *C. tenuiflora* plants (*in vitro*).]

Sargın, S.A., Akçicek, E. and Selvi, S. 2013. An ethnobotanical study of medicinal plants used by the local people of Alaşehir (Manisa) in Turkey. Journal of Ethnopharmacology 150(3): 860-874. [*Viscum album* ssp. *austriacum* among the most used medicinal plants.]

Saric´-Krsmanovic´, M., Božic´, D., Pavlovic´, D., Radivojevic´, L. and Vrbničanin, S. 2013. Temperature effects on *Cuscuta campestris* Yunk. seed germination. Pesticidi i Fitomedicina 28(3): 187-193. [Over 90% germination of acid-scarified seed of *C. campestris* was obtained at 25 and 30^0C. Without scarification, germination was improved by stratification at 4^0C for 30 days but did not exceed 40%.]

Sárpataki, O., Sevastre, B., Stan, R.L., Olah, N.K., Hanganu, D., Bedecean, I., Ionescu, C. and Marcus, I. 2014. *Viscum album* L. influence on the antioxidant enzymes activity in ehrlich tumor cells in vivo. Bulletin of University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca. Veterinary Medicine 71(1): 198-203. [Confirming a significant, selective antitumor effect, without obvious harmful effect on mice.]

*Satish Patel, Vikas Sharma, Chauhan, N.S. and Dixit, V.K.. 2014. A study on the extracts of *Cuscuta reflexa* Roxb. in treatment of cyclophosphamide induced alopecia. Daru - Journal of Pharmaceutical Sciences 22(7): (6 January 2014) (http://www.ncbi.nlm.nih.gov/pubmed/21428736) [Concluding that extracts of *C. reflexa* are capable of promoting follicular proliferation or preventing hair loss in cyclophosphamide-induced hair fall in rats.]

Satou, T., Miyagawa, M., Seimiya, H., Yamada, H., Hasegawa, T. and Koike, K. 2014. Prolonged anxiolytic-like activity of sandalwood (*Santalum album* L.) oil in stress-loaded mice. Flavour and Fragrance Journal 29(1): 35-38.

Semerci, A. 2913. Economic analysis of sunflower production in the view of orobanche resistance conditions. Pakistan Journal of Agricultural Sciences 50(3): 499-504. [In a detailed economic analysis, *O. cumana*-resistant sunflower gave

higher yields and economic return than imidazolinone (IMI)-resistant or non-resistant sunflower in Thrace, Turkey. No indication of *Orobanche* control by IMI herbicide.]

Shakeel, M.,. Trinidade, A., Geider, S. and Ah-See, K.W. 2014. The case for mistletoe in the treatment of laryngeal cancer. Journal of Laryngology and Otology 128(3): 302-306. [Describing an individual case in which a patient with laryngeal cancer apparently benefitted greatly from treatment with a *Viscum album* extract.]

Shekarchi, M.;, Kondori, B.M., Hajimehdipoor, H., Abdi, L., Naseri, M., Pourfarzib, M. and Amin, G. 2014. Finger printing and quantitative analysis of *Cuscuta chinensis* flavonoid contents from different hosts by RP-HPLC. Food and Nutrition Sciences 5(10): 914-921. [Reporting significant differences in the content of the four major flavonoids assumed to be reposnsible for medicinal properties (hyperoside, rutin, isorhamnetin, kaempferol) in nine *C. chinensis* samples, some from different hosts but no detail of the latter in the abstract.]

*Shen Hao, Xu ShuJun, Hong Lan, Wang ZhangMing and Ye WanHui. 2013. Growth but not photosynthesis response of a host plant to infection by a holoparasitic plant depends on nitrogen supply. PLoS ONE 8(10: e75555. {http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0075555) [*Mikania micrantha* suffers more severe inhibition in growth from *Cuscuta campestris* at low than at high nitrate levels, attributed to a higher proportion of host resources transferred to the parasite rather than a greater parasite-induced reduction in host photosynthesis.]

Shyaula, S.L., Choudhary, M.I. and Manandhar, M.D. 2013. Megastigmane, iridoid, benzyl alcohol and phenyl propanoid glycosides from the Nepalese sandalwood *Osyris wightiana* Wall. ex Wight. Moscow University Chemistry Bulletin 68(6): 293-297.

Shyu ShinYi and Hu JerMing 2013. Comparison of six DNA extraction procedures and the application of plastid DNA enrichment methods in selected non-photosynthetic plants. Taiwania 58(4): 268-274. [All extraction methods effective for *Balanophora japonica* and *Mitrastemon kanehirai*.(Balanophorales).]

Šiková, L. and Matějková, I. 2012. (Botanical and phytocenological survey of the locality Vracov by Plánice (district Klatovy).) (in Czech) Erica (Plzeň) 19: 3-33. [*Pedicularis sylvatica* noted among protected species.]

Simrandeep Singh, Mohanjit Kaur, Amarjeet Singh and Bimlesh Kumar. 2014. Pharmacological evaluation of anti-inflammatory and anti-ulcer potential of heartwood of *Santalum album* in rats. Asian Journal of Biochemical and Pharmaceutical Research 4(1): 140-153. [The reported results support and justify the traditional use of extract of heartwood of *S. album* for the treatment of inflammation and ulcer.]

Singh, L.J. and Vinay Ranjan. 2013. *Dendrophthoe glabrescens* (Blakely) Barlow (Loranthaceae) - an addition to the flora of Tamil Nadu, India. Indian Journal of Forestry 36(4): 523-524. [Including illustrations.]

Singh, S.P. and Devi, L.S. 2012. Management of root-knot nematode, *Meloidogyne incognita* on brinjal (*Solanum melongena* L.) with some plant extracts. Current Nematology 23(1/2): 65-72. [*Cuscuta reflexa* among extracts significantly reducing nematode infestation.]

Sinha, N. 2014. Characterizing the parasitism process in the parasitic weed *Cuscuta*. Abstract in Proceedings, Annual Meeting of the Weed Science Society of America, 26 February 2014. [A study of RNAs to assemble and annotate the transcriptome of *C. pentagona*, shedding light on the changes that accompany parasitism. Host plant not specified.]

Sipes, S.D., Hartz, K.E.H., Amin, H. Anterola, A. and Nickrent, D.L. 2014. Floral scent and pollinators of the holoparasite *Pilostyles thurberi* (Apodanthaceae). Journal of Pollination Ecology 12: 31-39. [*Augochloropsis metallica* bees (Halictidae) and eumenine potter wasps (Vespidae) identified as pollinators of *P. thurberi* on host *Dalea formosa*. They are attracted by a fragrance identified as a simple bouquet of raspberry ketone and several eugenols.]

Smith, R.G. and Cox, D.A. 2014. Effects of soil amendments on the abundance of a parasitic weed, yellow rattle (*Rhinanthus minor*) in hay fields. Weed Science 62(1): 118-124. [Amending hay fields with wood ash or sawdust may be an effective strategy for managing *R. minor* infestations which are becoming increasingly problematic in fields in the northeastern United States.]

*Soheil Zorofchian Moghadamtousi, Maryam Hajrezaei, Habsah Abdul Kadir and Keivan Zandi 2013. *Loranthus micranthus* Linn.: biological activities and phytochemistry. Evidence-based Complementary and Alternative Medicine 2013: Article ID 273712. (http://www.hindawi.com/journals/ecam/2013/2

73712/) [A review of the pharmacological properties, toxicity, and chemical constituents of *Loranthus micranthus (= Ileostylus micranthus*).]

Soheil Zorofchian Moghadamtousi, Muhamad Noor, A.K., Chan ChimKei;,Goh BeyHing and Habsah Abdul Kadir. 2014. Phytochemistry and biology of *Loranthus parasiticus* Merr, a commonly used herbal medicine. American Journal of Chinese Medicine 42(1): 23-35. [Listing the components of *L. parasiticus* (= *Scurrula parasitica* var. *parasitica*) which may contribute to the wide range of traditional medicinal uses of this plant in China.]

Solat Perveen, Bukhari, I.H., Qurat-Ul-Ain, Shazia Kousar and Jeveria Rehman. 2013. Antimicrobial, antioxidant and minerals evaluation of *Cuscuta europea* and *Cuscuta reflexa* collected from different hosts and exploring their role as functional attribute. International Research Journal of Pharmaceutical and Applied Sciences 3(5): 43-49. [Work conducted in Pakistan.]

Soudzilovskaia, N.A., Elumeeva, T.G., Onipchenko, V.G., Shidakov, I.I, Salpagarova, F.S., Khubiev, A.B., Tekeev, D.K. and Cornelissen, J.H.C. 2013. Functional traits predict relationship between plant abundance dynamic and long-term climate warming. Proceedings of the National Academy of Sciences of the United States of America 110(45): 18180-18184. [*Pedicularis comosa* and *P. caucasica* among species studied from which it is concluded that In this mountain belt, traits that promote conservative leaf water economy (higher leaf mass per area, thicker leaves) and large investments in belowground reserves to support next year's shoot buds (root carbon content) were the best predictors of the species increase in abundance along with temperature increase.]

Stavi, I., Silver, M. and Avni, Y. 2014. Latitude, basin size, and microhabitat effects on the viability of Acacia trees in the Negev and Arava, Israel. Catena, 2014, 114, 149-156. [Including observations on *Plicosepalus acaciae* which occurred in 8% *Acacia* spp. *A. raddiana*, *A. tortilis*, and *A. pachyceras*.]

Stöckel, M., Těšitelová, T., Jersáková, J., Bidartondo, M.I. and Gebauer, G. 2014. Carbon and nitrogen gain during the growth of orchid seedlings in nature. New Phytologist 202(2): 606-615. [Concluding that partial mycoheterotrophy among saprotroph-associated orchids cannot be identified unequivocally based on C and N isotope compositions alone. Thus, partial mycoheterotrophy may be much more widely distributed among orchids than hitherto assumed.]

Subasinghe, S.M.C.U.P. 2013. Sandalwood research: a global perspective. Journal of Tropical Forestry and Environment, 3(1): 1-8. [A general review on ecology, management and uses of *Santalum* spp.]

Suetsugu, K., Kawakita, A. and Kato, M. 2014. Evidence for specificity to *Glomus* group Ab in two Asian mycoheterotrophic *Burmannia* species. Plant Species Biology 29(1): 57-64. [Confirming that *B. championii* and *B. cryptopetala* species are associated with several distinct lineages of *Glomus* group Ab.]

Sui XiaoLin, Li AiRong, Chen Yan, Guan KaiYun, Zhuo Lu and Liu YanYan. 2014. Arbuscular mycorrhizal fungi: potential biocontrol agents against the damaging root hemiparasite *Pedicularis kansuensis*? Mycorrhiza 24(3): 187-195. [Showing that *P. kansuensis* which causes loss of herbage yield in China, can be suppressed by the AM fungus *Glomus mosseae* with significant benefit to the host *Elymus nutans*.]

Sulborska, A., Konarska, A. and Chmielewski, P. 2014. Morphology and histochemistry of glandular trichomes of *Orobanche alba* Stephan ex Willd. Modern Phytomorphology 6 21. [Hosts of *O. alba* in Poland include *Tymus polytrichus, Clinopodium vulgare* and *Origanum vulgare.* The peltate glandular trichomes were composed of one basal epidermal cell, 1-3 hyaline stalk cell, a neck cell and a globose head formed of 8-18 secretory cells in a circle.]

Sulborska, A., Konarska, A. and Chmielewski, P. 2014. Micromorphology of flowers and the structure of floral nectaries in *Orobanche alsatica* Kirschl. Modern Phytomorphology 6: 23. [Hosts of *O. alsatica* in Poland are members of Apiaceae.]

Sun SiSheng, Chen XiaoMei and Guo ShunXing. 2014.Analysis of endophytic fungi in roots of *Santalum album* Linn. and its host plant *Kuhnia rosmarinifolia* Vent. Journal of Zhejiang University (Science B) 15(2): 109-115. [Surveying the wide, but different, ranges of endophytic fungi found in *S. album* and *K. rosmarinifolia*.]

Sweta Bhan, Shrankhla, Lalit Mohan and Srivastava, C.N. 2013. Combinatorial potentiality of *Aspergillus flavus* and *Cuscuta reflexa* against mosquito vectors. Advances in Bio Research 4(4): 99-105. [*A. flavus* combined with petroleum ether extract of *C. reflexa* was active against *Anopheles stephensi* and *Culex quinquefasciatus* larvae.]

Taira, T.L., Abot, A.R., Nicácio, J., Uchôa, M.A., Rodrigues, S.R. and Guimarães, J.A. 2013. Fruit flies (Diptera, Tephritidae) and their parasitoids on cultivated and wild hosts in the Cerrado-Pantanal ecotone in Mato Grosso do Sul, Brazil. Revista Brasileira de Entomologia 57(3): 300-308. [Records for *Anastrepha castanea* and *A. daciformes* on a *Schoepfia* sp. (Olacaceae),]

Tájek, P.; 2012. (Serpentine fens: flora and vegetation of Mokřady pod Vlčkem wetlands Nature Reserve.) (in Czech) Erica (Plzeň) 19: 35-86. [*Pedicularis palustris* noted among rare endangered species.]

Takem, L.P., Lawal, B.A.S. and Lennox, J.A, 2014. Anti-diarrhoeagenic properties of aqueous extract of *Phragmanthera capitata* S. Balle in albino rats. European Journal of Medicinal Plants 4(6): 743-752. [Confirmation of same.]

Talve, T., McGlaughlin, M.E., Helenurm, K., Wallace, L.E. and Oja, T. 2014. Population genetic diversity and species relationships in the genus *Rhinanthus* L. based on microsatellite markers. Plant Biology 16(2): 495-502. [Microsatellite primers used to show that *R. javorkae* and *R. minor* were genetically most differentiated. Section *Cleistolemus* is weakly structured genetically, indicating close affinity between *R. osiliensis*, *R. rumelicus*, *R. wagneri* and *R. angustifolius*.]

Tambalo, D.D., Vanderlinde, E.M., Robinson, S., Halmillawewa, A., Hynes, M.F. and Yost, C.K. 2014. Legume seed exudates and *Physcomitrella patens* extracts influence swarming behavior in *Rhizobium leguminosarum*. Canadian Journal of Microbiology 60(1): 15-24. [Results suggest that strigolactone may be a signalling molecule activating swarming motility in *R. leguminosarum*.]

Teklay Abebe, Hadas Beyene and Yemane Nega 2013. Distribution and economic importance of broomrape (*Orobanche crenata*) in food legumes production of south Tigray, Ethiopia. eSci Journal of Crop Production 2(3): 101-106. [An alarming description of the increasing threat from *O. crenata* in Tigray, Ethiopia, where a random survey indicated 30-80% of faba bean crops infested. Farmers are having to give up growing legumes with detriment to the crop rotation and local diets. It is believed the original introduction was via contaminated food aid, while local spread occurs via contaminated seed in markets, and via farm machinery.]

Teklay Abebe, Kiros Meles, Yemane Nega, Hadas Beyene and Abrha Kebede. 2013. Interatcion between broomrape (*Orobanche crenata*) and resistance faba bean genotypes (*Vicia faba* L.) in Tigray region of Ethiopia. Canadian Journal of Plant Protection 1(3): 104-109. [A range of 14 'resistant' faba bean varieties tested in 2 field trials. None fully resistant but ILB4358 best, yielding 3 times susceptible check. Several others showed delayed emergence of *O. crenata* and doubled yields.]

Tennakoon, K.U., Chak, W.H., Lim, L.B.L. and Bolin, J.F. 2014. Mineral nutrition of the hyperparasitic mistletoe *Viscum articulatum* Burm. f. (Viscaceae) in tropical Brunei Darussalam. Plant Species Biology 29(1): 101-107. [Studying *V. articulatum*, hyperparasitic on the primary parasite *Dendrophthoe curvata*, parasitic on *Mangifera indica*; and *V. articulatum*, hyperparasitic on *Macrosolen cochinchinensis*, parasitic on *Durio zibethinus*. *V. articulatum* had consistently higher contents of all major and minor elements compared to the primary parasite and the tree host branch.The primary parasite had lower contents of Cu, Mg, Mn, N, and Z than the tree host branch, suggesting nutritional stress applied by the hyperparasite. P and K increased from tree host, to primary mistletoe, and finally the hyperparasitic.]

Thorogood, C.J. and Hiscock, S.J. 2014. Field Guide to the Wild Flowers of the Algarve. Royal Botanic Gardens, Kew. 280 pp. [A comprehensive identification guide to over 1000 species of the Algarve region of southern Portugal. There are no keys but it is richly illustrated with photographs and hundreds of superb additonal line drawings to emphasise differences between species. Including a wide range of parasitic speceis (see text item above). Highly recommended.]

Tkach, N., Ree, R.H., Kuss, P., Röser, M. and Hoffmann, M.H. 2014. High mountain origin, phylogenetics, evolution, and niche conservatism of arctic lineages in the hemiparasitic genus *Pedicularis* (Orobanchaceae). Molecular Phylogenetics and Evolution 76: 75-92. [A study of the phylogeny of 28 taxa of *Pedicularis* occurring in the Arctic concludes that they are mostly related to lineages that otherwise occur in the high mountains of Eurasia and North America.]

Tokasi, S., Aval, M.B., Mashhadi, H.R. and Ghanbari, A. 2014. Screening of resistance to Egyptian broomrape infection in tomato varieties. Planta Daninha 32(1): 109-116. [Finding moderate resistance to *Orobanche aegyptiaca* in varieties Viva, Caligen 86, Hyb. PS 6515, Hyb.Firenze (PS 8094) and Cal-jN3.]

Torres-Vera, R., García, J.M., Pozo, M.J. and López-Ráez, J.A 2014. Do strigolactones contribute to plant defence? Molecular Plant Pathology 15(2): 211-216. [A strigolactone-deficient tomato line was more susceptible to *Botrytis cinerea* and *Alternaria alternata*, apparedntly due to interaction with the jasmonic acid signaling pathway.]

Treštic´, T., Mujezinovic´, O., Čabaravdic´, A. and Muratagic´, I. 2013. (Impact of micro-locality factors to the intensity of infestation of silver fir trees with white mistletoe.) (in Croation) Šumarski List 137(11/12): 575-582. [Finding that the level of shading is the main factor modifying intensity of *Viscum album* in silver fir in Croatia.]

Tröger, W., Galun, D., Reif, M., Schumann, A., Stankovic´, N. and Milic´evic´, M. 2013. *Viscum album* [L.] extract therapy in patients with locally advanced or metastatic pancreatic cancer: a randomised clinical trial on overall survival. European Journal of Cancer 49(18): 3788-3797. [Findings suggest *V. album* extract to be a non-toxic and effective second-line therapy that offers a prolongation of overall survival as well as less disease-related symptoms for patients with locally advanced or metastatic pancreatic cancer.]

Türkseven, S., Molaei, P., Nemli, Y., Keçecioğlu, O. and Aksan, E. 2013. (The effect of solarization and some fumigants on broomrape (*Phelipanche ramosa* (L.) Pomel/*P. aegyptiaca* (Pers.) Pomel) in tomatoes greenhouses.) (in Turkish) Ege Üniversitesi Ziraat Fakültesi Dergisi 50(3): 285-289. [lodomethane and methamsodium reduced *P. ramosa* by over 90%. Solarization was 77% effective alone, and slightly increased effects of fumigant.]

Ukida, K., Doi, T., Sugimoto, S., Matsunami, K., Otsuka, H. and Takeda, Y. 2013. Schoepfiajasmins A-H: *C*-glycosyl dihydrochalcones, dihydrochalcone glycoside, *C*-glucosyl flavanones, flavanone glycoside and flavone glycoside from the branches of *Schoepfia jasminodora*. Chemical & Pharmaceutical Bulletin 61(11): 1136-1142.

van Raab-Straube, E. and Raus, T. 2013. Euro+Med-Checklist Notulae, 2. Willdenowia 43(2): 239-249. [Including an item on Orobanchaceae but no detail in abstract.]

van Welzen, P.C., Esser, H.J., Nooteboom, H,P. and van Welzen, P.C. 2013. Peraceae (formerly Euphorbiaceae s.l. subfam. Acalyphoideae tribes Clutieae, Pogonophoreae, Chaetocarpeae and Pereae). Flora Malesiana. Series I, Seed plants. Volume 21: Lecythidaceae; Peraceae, 119-138. [The early branching clades of Euphorbiaceae s.l. are here recognized as two monophyletic families: Peraceae and Rafflesiaceae.]

Varga, I., Baltazár, T. and Pejchal, M. 2013. Optimisation of growing conditions of European mistletoe hyperparasitic fungus (*Phaeobotrzosphaeria visci*): effect of different media and antibiotics. Acta Horticulturae et Regiotecturae 16(2): 44-47. [Oatmeal agar and potato-dextrose agar were found suitable to maintain the fungus, while all tested antibiotics are useful, except nystatin.]

Varga, I., Baltazár, T. and Poczai, P. 2014. (Effect of different solid and liquid media on the growth of the hyperparasitic fungus (*Phaeobotryosphaeria visci*) on European mistletoe (*Viscum album*).) (in Hungarian) Növényvédelem 50(5): 214-224. [Exploring the optimum means of propagating *P. viscid* as a potential biocontrol agent for control of *V. album*.]

Vivek Sharma, Gupta, R.C., Santosh Bala and Bikram Singh. 2013. New chromosome number reports in some medicinally important angiosperms of North India. Cytologia 78(3): 285-296. [Reporting chromosome numbers for *Euphrasia himalaica* (2*n*=22) and *Pedicularis longiflora* (2*n*=14),]

*Vogl, S. and 14 others. 2013. The herbal drug *Melampyrum pratense* L. (Koch): isolation and identification of its bioactive compounds targeting mediators of inflammation. Evidence-based Complementary and Alternative Medicine 2013: Article ID 395316. (http://www.hindawi.com/journals/ecam/2013/395316/) [Results validate the ethnomedical use of *M. pratense* in Austria for the treatment of inflammatory conditions and point to the active compounds being the flavonoids apigenin and luteolin.]

Wang GuangYan, Han Xi, Meng Ying and Yang YongPing. 2013. Cytogeographical study on *Pedicularis longiflora* from the Qinghai-Tibetan Plateau, China. Guangxi Zhiwu / Guihaia 33(5): 657-662, 650. [All 9 populations of *P. longiflora* had chromosome numbers of 2*n*=16. Relationship with populations in Yunnan and Qinghai is discussed.]

Wang JianCheng, Vamosi, J.C., Yang HongLan, Zhang DaoYuan and Pan BoRong. 2013. Phylogenetic signal detection in the taxa experienced a slowdown of diversification rate: verification on *Pedicularis* sp. (Orobanchaceae). Vegetos 26(2): 72-79. [Many thanks to Dan Nickrent for trying, but even he is unable to make sense of the 'English' abstract.]

Wang TianJing, An Jin, Chen XiaoHui, Deng QiuDi and Yang Liu. 2014. Assessment of *Cuscuta chinensis* seeds' effect on melanogenesis: comparison of water and ethanol fractions *in vitro* and *in vivo*. Journal of Ethnopharmacology 154(1): 240-248. [Exploring the contrasting effects reported for *C. chinensis* – it may be used to treat freckles and melasma in Asia, while it can also promote melanogenesis – and concluding that there are differences between water and ethanol fractions.]

Wang ZhengHui, Lu ChuangXin, Wu CaiQin, Xu Min, Kou XiaoHui, Kong DeMin and Jing GangLi. 2014. Polysaccharide of *Boschniakia rossica* induces apoptosis on laryngeal carcinoma Hep2 cells. Gene 536(1): 203-206. [Results demonstrate that the polysaccharide from *B. rossica* shows potent anti-tumor activity in human larynx squamous carcinoma.]

*Weissenstein, U., Kunz, M., Urech, K. and Baumgartner, S. 2014. Interaction of standardized mistletoe (*Viscum album*) extracts with chemotherapeutic drugs regarding cytostatic and cytotoxic effects *in vitro*. BMC Complementary and Alternative Medicine 14(6): (8 January 2014) (http://www.biomedcentral.com/1472-6882/14/6) [Results suggest no interference or safety risk when *V. album* extracts are combined with standard chemoptherapy drugs applied to a range of cancer cell and at higher doses the extracts showed additive effects.]

White, D. W., A. J. Alverson, A. O. Richardson, G. J. Young, M. V. Sanchez-Puerto, J. Munzinger, K. Barry, J. L. Boore, Y. Chang., C. W. dePamphilis, E. B. Knox, J. D. Palmer. 2014. Horizontal transfer of entire genomes via mitochondrial fusion in the angiosperm *Amborella*. Science 342: 1468-1473. [*Amborella trichopoda* is ancestral to all flowering plants and is endemic to New Caledonia. Through the process of lateral gene transfer, vast amounts of genetic material from algae, fungi, mosses, and parasitic angiosperm have been incorporated into *Amborella*. The Santalalean families are well represented in New Caledonia and have contributed considerable genetic material.]

Wicke, S., Müller, K.F., de Pamphilis, C.W., Quandt, D., Wickett, N.J., Zhang, Y., Renner, S.S. and Schneeweiss, G.M. 2013. Mechanisms of functional and physical genome reduction in photosynthetic and nonphotosynthetic parasitic plants of the broomrape family. Plant Cell 25(10): 3711-3725. [Describing the changes in the chloroplast genome in plants that specialise in parasitism., specifically those in Orobanchaceae including *Conopholis americana*. With the loss of the need of photosynthesis many chloroplast genes are lost resulting in very small chloroplast genomes. Interestingly, also intact genes are still found in the chloroplasts and are conserved among different parasites, such as ATP synthase. The loss or retention of chloroplast genes seems to depend both on function and organisation of the chloroplast genome.]]

Wilson, B.L., Brainerd, R.E. and Otting, N. 2014. Identification and taxonomic status of *Cordylanthus tenuis* subsp. *pallescens* (Orobanchaceae). Madroño 61(1): 64-76. [Recommending that the name *C. tenuis.* ssp. *pallescens* should be restricted to populations of this Californian rarity in which all or most plants have the combination of traits expected of this taxon, including yellow-green foliage, four to eight flowers per cluster, and short, mostly non-glandular calyx hairs.]

Wróblewska, A. 2013. High genetic diversity within island-like peripheral populations of *Pedicularis sceptrum-carolinum*, a species with a northern geographic distribution. Annales Botanici Fennici 50(5): 289-299.

Wu Zhi. Guo Qiang, Li MingGuang, Jiang Lu, Li FengLan, Zan QiJie and Zheng Jie. 2013. Factors restraining parasitism of the invasive vine *Mikania micrantha* by the holoparasitic plant *Cuscuta campestris*. Biological Invasions 15(12): 2755-2762. [For maximum effectiveness as a biological agent for *M. micrantha* (a severe problem in S. China) *C. campestris* must be within 4 cm of *M. micrantha* stems no more than 3 mm in diameter.]

Xing YaChao. Liao Jing, Tang YingZhan, Zhang Peng, Tan ChengYu, Ni Hui, Wu XueQin, Li Ning and Jia XiaoGuang. 2014. ACE and platelet aggregation inhibitors from *Tamarix hohenackeri* Bunge (host plant of Herba Cistanches) growing in Xinjiang. Pharmacognosy Magazine 10(38): 111-117. [Studying the active flavonoid components in *T. hohenackeri* but not clear what relevance this has as the host of *Cistanche* spp.]

Xiong WenTing, Gu Li, Wang Chao, Sun HongXia and Liu Xin. 2013. Anti-hyperglycemic and hypolipidemic effects of *Cistanche tubulosa* in type 2 diabetic *db/db* mice. Journal of Ethnopharmacology 150(3): 935-945. [Providing evidence for the use of *C. tubulosa* in treatment of diabetes, significantly suppressing the blood glucose levels and improving insulin resistance

and dyslipidemia in diabetic mice, without, however significantly affecting serum insulin levels or hepatic and muscle glycogen levels.]

Yang ChunFeng, Wang QingFeng and Guo YouHao. 2013. Pollination in a patchily distributed lousewort is facilitated by presence of a co-flowering plant due to enhancement of quantity and quality of pollinator visits. Annals of Botany 112(9) 1751-1758. [Pollination of *Pedicularis densispica* was higher when in mixture with *Astragalus pastorius*, as a result of increased numbers of *Bombus* spp. and differential placement of pollen on the bee.]

Yıldırım, S. and Tepe, I. 2014. (Distribution and density of alfalfa dodder (*Cuscuta approximata* Bab.) in alfalfa in Van province, Turkey.) (in Turkish) Yüzüncü Yil Üniversitesi Journal of Agricultural Sciences 24(1): 42-50. [A survey confirming very high infestations of *C. approximata* in the province.]

*Yoo DaeYoung and 9 others. 2014. *Cynomorium songaricum* extract enhances novel object recognition, cell proliferation and neuroblast differentiation in the mice via improving hippocampal environment. BMC Complementary and Alternative Medicine 14(5): (7 January 2014). (http://www.biomedcentral.com/1472-6882/14/5) [*C. songaricum* has been used as a medicine in Korea to treat age-related memory impairment, dementia, and stress.]

Yu WenBin, Kuss, P., Wang Hong, Ree, R.H. and Li DeZhu. 2014. Lectotypification of Linnaean names in *Pedicularis* (Orobanchaceae). Taxon 63(1): 172-176. [Lectotypes are designated from the Linnaean herbarium for *P. comosa*, *P. flammea*, *P. hirsuta*, *P. incarnata*, *P. lapponica*, *P. resupinata*, *P. rostrata*, *P. tristis*, *P. tuberosa* and *P. verticillata*.]

Yu WenBin, Mill, R.R., Wang Hong and Li DeZhu. 2013. Proposal to conserve the name *Pterygiella cylindrica* against *Brandisia praticola* (*Orobanchaceae*). Taxon 62(5):1067-1068.

Yu WenBin, Wang Hong and Li DeZhu. 2013. Proposal to conserve *Pedicularis stenocorys* against *P. stenantha* (*Orobanchaceae*). Taxon 62(5): 1066-1067.

Zafeer Saqib, Adeel Mahmood, Malik, R.N., Aqeel Mahmood, Syed, J.H. and Tahira Ahmad. 2014. Indigenous knowledge of medicinal plants in Kotli Sattian, Rawalpindi district, Pakistan. Journal of Ethnopharmacology 151(2): 820-828. [*Cuscuta reflexa* among plants commonly used.]

Zare, G., Dönmez, A.A. and Dönmez, E.O. 2014. Pollen morphology and evolution in the genus Orobanche L. s.l. and its allied genera (Orobancheae/Orobanchaceae) in Turkey. Plant Systematics and Evolution 300(5): 783-802. [Reporting a study of 40 species of *Cistanche*, *Diphelypaea*, *Orobanche* and *Phelipanche* native to Turkey. Some characters are significant at the levels of genera and sections and results support the division of the two genera, *Phelipanche* and *Orobanche*.]

*Zhang DaLe and 12 others. 2014. Root parasitic plant *Orobanche aegyptiaca* and shoot parasitic plant *Cuscuta australis* obtained Brassicaceae-specific *strictosidine synthase-like* genes by horizontal gene transfer. BMC Plant Biology 14(19): 14 pp. (http://www.biomedcentral.com/content/pdf/1471-2229-14-19.pdf) [Transcriptome screening revealed that a *strictosidine synthase-like* (*SSL*) gene in the root parasitic plant *O. aegyptiaca* and the shoot parasitic plant *C. australis* showed much higher sequence similarities with those in Brassicaceae than with those in their close relatives, suggesting independent gene horizontal transfer events from Brassicaceae to these parasites. Also, the foreign genes may still retain certain functions in the recipient species.]

Zhang XieJun, Su BenWei, Li Jing, Li YongHua, Lu Dong, Zhu KaiXin, Pei HeHuan and Zhao MingHui. 2014. Analysis by RP-HPLC of mangiferin component correlation between medicinal loranthus and their mango host trees. Journal of Chromatographic Science 52(1): 1-4. [Showing that mangiferin was present in an unspecified Loranthaceae when parasitising mango but not on other host trees indicating that host trees could affect the quality of medicinal extracts from the parasite.]

Zhao Wei, Wu Qing, Ruan HongShi, Liu JunFeng, Mo XiuMei and Chen DaCan. 2014. (Professor CHEN Da-can's experience in treating skin diseases by using herbs from Lingnan region in China.) (in Chinese) China Journal of Traditional Chinese Medicine and Pharmacy 29(5): 1308-1311. [The Professor's remedies include the use of *Striga asiatica* to 'promote digestion and remove food stagnation'.]

Zhou Jun, Zhang Qiong, Sun JiangBing, Wang FengQiao and Zeng Ping. 2014. Simultaneous separation and determination of four phenylethanoid glycosides in rat plasma sample after oral administration of *Cistanche salsa* extract by microemulsion liquid chromatography. Journal of Chromatography, B 951/952: 24-31.

Ziveh, P.S., Fadakar, F. and Mahdavi, V. 2013. Chemical control of dodder (*Cuscuta* spp.) in the sugar beet fields. Technical Journal of

Engineering and Applied Sciences 3(24): 3502-3505. [Concluding from an experiment in Iran that 'taking into account the environmental negative effects of propyzamide and low environmental impact of ethofumesate herbicide is recommended for control dodder in the beet fields.' Meaning?]

Znajdek-Awiżen´, P., Studzin´ska-Sroka, E. and Bylka, W. 2013. (Eyebright - activity, therapeutic use, review of research.) (in Polish) Postepy Fitoterapii 4: 256-259. [Reviewing the active ingredients in extracts of *Euphrasia officinalis* L. and *E. rostkoviana*, their uses in folk medicine and noting that there are no adverse effects from their use as eye drops.]

Zytynska, S.E., Frantz, L., Hurst, B., Johnson, A., Preziosi, R.F. and Rowntree, J.K. 2014. Host-plant genotypic diversity and community genetic interactions mediate aphid spatial distribution., Ecology and Evolution 4(2): 121-131. [Discussing interactions between the aphid *Sitobion avenae Rhinanthus minor* and its host *Hordeum vulgare*.]

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