INTERNATIONAL ORGANIZATION OF CITRUS VIROLOGISTS

NEWSLETTER June, 2008

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From the Chairperson

Núria Duran-Vila, Chairperson

It has been a pleasure for me to become the chairperson of this organization on its 50th anniversary. I would like to thank the organizing committee as well as all those whose input made the XVIIth Conference of the IOCV in Adana (Turkey), a success. During the last 50 years, our understanding of citrus diseases has evolved from the concept of "graft transmissible diseases" to the implication of biotic entities such as viruses, viroids and endogenous bacteria. With the development and application of new tools, we can now characterize the genomes of infectious disease agents and even determine how many virions a vector carries or how many liberibacters (or phytoplasmas!) colonize a branch of an HLB affected tree. All this has been possible because: a) IOCV members are devoted scientists; b) they work together, sharing their knowledge; and c) last but not least, IOCV scientists go from the laboratory to the field and work hand in hand with growers, extension officers and nurserymen. The accomplishments of IOCV are the result of such cooperative efforts. Josy Bové, in the frame of an invited lecture, gave a very detailed account of the major scientific contributions of this organization, and additional information will be found in the next Proceedings of the XVIIth IOCV Conference (see also this newsletter). The meeting on "Citrus Virus Diseases" held in 1957 in Riverside brought together scholars from 13 different countries. That was the beginning of the IOCV and a long venture of exchange, cooperation and friendship. Today, almost 50 years later, the spirit of the first meeting persists but in the 2007 XVIIth Conference only 22 countries were represented, not many more than in 1957. In the era of COMMUNICATION AND GLOBALIZATION, I consider that an organization that reaches only 22 out of the 139 countries listed by FAO as citrus growing countries can do better. We must improve this situation if we want IOCV to be a truly international organization. The overall production of these 139 countries is around 108 Mt of citrus fruit. Only five countries produce 58% of the total. These countries are Brazil, USA, China, Mexico and Spain.

Núria Duran-Vila

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From the Chairperson continued from page 1

The participation of China and Mexico to our meetings has been sporadic and I am looking forward for their views and contributions in the future. The ten major producers, the five previous ones plus India, Iran, Nigeria, Italy and Turkey are responsible for 63% of the world production. Nigeria, which is the number one citrus growing country in Africa with a production above that of Italy, Argentina, South Africa or Japan, never attended our meetings, whereas India and Iran were absent from the lasts conferences.

If we want this organization to persist and be meaningful in the 21th century, we must reach other countries. I am convinced that we can benefit from each other.

If we want this organization to persist and be meaningful in the 21th century, we must get young people to join the organization because THE FUTURE IS THEIRS.

And let's not neglect those countries with a small production. A small production may be economically meaningful not only for the country as a whole, but also for the income of the farmers and the health of the population. Let's do an effort to learn about their citrus industries. I am sure we will find problems to be solved. I am sure that IT WILL BE PROFESSIONALY CHALLENGING AND PERSONALLY REWARDING.

In the past years, through research, many diseases have disappeared from the citrus orchards of quite a few countries, and we have learned to live with other severe diseases. However, the battle is never finished, as the recent situations in São Paulo state and Florida have shown dramatically: IOCV is needed more than ever. I wish long life to our unique organization.

From the Past and Present Secretaries

Georgios Vidalakis, Secretary

"LIFE DEFINITELY HAS MORE IMAGINATION THAN ME"… this is the phrase that I am using in my conversations with friends and colleagues to describe my life experiences of the last eight years. After working with one of the most inspirational professors in the Agricultural University of Athens, Greece (Kyriakopoulou, aka Prof. Toula), earning my degree from the "cradle of citrus virology" with three prominent citrus pathologists (Garnsey, Gumpf, Semancik) and working for the historical Citrus Clonal Protection Program (CCPP), now I am succeeding one of the most recognizable individuals in our organization.

Chester Roistacher, our Chet, has been tirelessly serving citrus pathology for more than half of the century. Supervisor of the CCPP for more than 25 years, consultant of national and international organizations for 30 years, teacher of citrus virology for more than 20 years, writer of two reference point publications for the graft transmissible diseases of citrus in addition to hundreds of technical ones, chairman and secretary (1995-2007) of the International Organization of Citrus Virologists (IOCV) Chet has offered and keeps offering generously his knowledge and passion for a disease free citriculture.

Georgios & Chet

As you can imagine Chet's past is not making this succession an easy task but I have his promise for close collaboration and therefore, I feel safe to promise you that the high level of services that our previous secretary has been providing our organization for decades will continue.

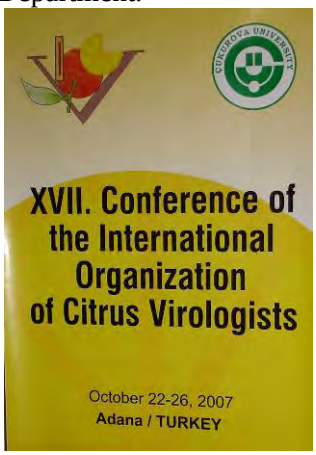
From my part I will do my best to bring our publications, data filing systems, communication, and webpage up to date with the digital technology to improve speed, accuracy, and convenience. As one of the youngest members of IOCV I was very pleased to see a steady increase of young faces from my first meeting in Cyprus to the last one in Turkey. I will do my best in collaboration with the board of directors to attract even more young people to IOCV memberships and conference participations so more young lives, scientific and social, will become enriched and self-creative as mine. LOOKING FORWARD …

About the XVII Conference

On behalf of the Organizing Committee of the XVII IOCV Conference

Nuket Önelge and Orhan Boozan

The XVII. International Organization of Citrus Virologists Conference was held in Adana-Turkey, from October 18th to October 26th 2007. XVII. IOCV Conference was organized by IOCV and Çukurova University, Agricultural faculty, Plant Protection Department.



In this Conference 55 oral presentations, 3 invited talks, and 47 poster were presented by participants. 84 delegates from 22 different countries participated to XVII. IOCV Conference. *Citrus tristeza virus*, Huanglongbing, Citrus sudden death, Citrus variegated chlorosis, citrus viroids and citrus diseases were discussed in different sessions.

During Pre-Conference and Conference a lot of citrus diseases like Yellow vein clearing, citrus chlorotic dwarf disease, citrus stubborn disease, citrus gummy bark, Citrus cachexia viroid and *Citrus tristeza virus* were shown to participants from various areas of Çukurova Region, in the Eastern Mediterranean region of Turkey.

We want to thank all participants for their relevance. And also we want to thank very much to The International Organization of Citrus Virologists, Çukurova University, Agricultural faculty, Plant Protection Department, Adana Plant Protection Research Institute. Adana Yüreğir Citrus Growers Association, Mediterranean Exporter Union, Adana Chamber of Commerce and citrus growers; Mr. Bülent Özler and Mr. Adil Bayar for their contributions.

We wish that all of participants had a good time during conference and we want to see all participants again in Adana-Turkey.

Highlights of the XVII Conference

John DaGraca

We celebrated our 50th anniversary in Adana, Turkey in October surrounded by warm Turkish hospitality and fine weather.

Welcoming in Erzin

Prior to the conference itself, 36 delegates participated in a three-day pre-conference tour, visiting several citrus orchards near Adana, Dörtyol, Erzin and Mersin to observe Yellow Vein Clearing, Chlorotic Dwarf, Cachexia, Gummy Bark, Tristeza and Stubborn.

Gummy Bark
Dörtyol Orange on Sour Rootstock

We also toured a modern packingshed and juice/fresh cut fruit plant, ate generous servings of wonderful Turkish food provided by local growers and community leaders, and visited many historically significant sites covering many centuries, including Tarsus (birthplace of St. Paul), the battle site where Alexander the Great defeated the Persian King Darius, Kandlidivane ("bloody like hell"!), a Roman amphitheater in Mersin, and Snake and Maiden's Castles. The organizing committee, led by Nuket Önelge and Orhan Bozan, and the Nextour Travel Agency folk, Mrs Nesrin Göçhan and our guide Ali Levent, did an amazing job.

Chlorotic Dwarf & Healthy Sweet Orange

The conference was held in the Hotel Seyhan, and began on Monday morning, October 22. Following a short concert of classical music, 84 delegates from 20 countries were welcomed by Nuket Önelge and John da Graça (IOCV Chairman), followed by addresses from the Uğur Paksoy (Chairman of the Adana Citrus Growers Association), Dr Ayzin Küden (Dean of Agriculture, Çükurova University) and Dr Alper Akınoğlu (Rector of the University) who formally opened the conference.

Kanytelleis-Kanli Divane
Hellenistic ruins 3rd Cntr BC

The first presentation was an invited review of the IOCV's first 50 years by Josy Bové, an ideal choice to present our history since he was present at the first meeting in 1957 and has attended all but one conference. He gave a superb informative, comprehensive and entertaining review with a title summarizing the developments – "From graft-transmitted citrus agents to viroids, viruses and endogenous bacteria".

As usual, the major topic of an IOCV meeting was tristeza, and many papers and posters were presented on this topic. We heard about the spread of CTV in Italy, the establishment of the brown citrus aphid in Spain and Portugal, surveys in Croatia, Syria and Tanzania, progress in diagnosis, understanding genome functions, evolution of virus strains, an invited review of cross protection by Chet Roistacher, and its successful application in Peru. Delegates attended a welcome cocktail reception at Çükurova University on Monday evening.

The Business Meeting was held on Tuesday afternoon, and lasted over 4 hours. Many important topics were covered – the nominations of 3 new IOCV Fellows were approved, Victoria Rossetti, Pete Timmer and Luis Navarro. Members also accepted an invitation from Brazil for the 18th conference in 2010, and responded positively to Marina Barba's proposal to publish the proceedings in *Petria*, a journal of the CRA in Rome. Afterwards, we enjoyed a gala dinner outside at the Uptown Restaurant.

Antioch
St.Peter's Grotto

We took a mid-week break on Wednesday, and toured citrus orchards as well as the ancient city of Antioch, with stops at St.Peter's Grotto and the Hatay Museum.

Mosaic
Hatay Museum

When the conference resumed, we got updates on Sudden Death, tatter leaf, CVC, viroids, and finally on Friday, considerable attention was given to Huanglongbing. This is now becoming the number one priority with the confirmation of the disease in both Brazil and Florida. There may be a new pathogen, a phytoplasma, causing some HLB symptoms in Brazil, South Africa may have found a source of resistance in recovered embryos from

chimeric fruit, Brazil is developing management practices to reduce losses, and maybe guava interplants will help reduce psyllid populations. At the 50th birthday banquet at Park Zirve, Chet Roistacher cut the cake, John da Graca gave out attendance certificates, and then handed the chair over to Nuria Duran-Vila. She addressed the gathering with her goals of growing IOCV in the coming years, and then introduced the new chairman-elect, Mark Hilf.

Núria Duran-Vila Chairperson & Mark Hilf Chairperson-Elect

Everyone left Turkey with a wealth of good memories. To Nuket, Orhan and all their smiling students and assistants, our sincere thanks for making us all so welcome and for organizing a highly successful conference.

1957-2007, Fifty Years of IOCV: On Conferences, Pre-conferences, and Post-conferences.

Josy Bove

In 1957, the well-known Citrus Experiment Station (CES) of the University of California at Riverside, USA, celebrated its 50th anniversary. This was a good opportunity to hold the first international conference on so-called "virus" diseases of citrus, of which many had been studied in California, if not Florida. Maladies such as Tristeza, Psorosis, Concave gum and Blind pocket, Crinkly leaf and Infectious variegation, Stubborn, Xyloporosis and Cachexia, Exocortis, and Vein enation had been shown to be transmissible by graft-inoculation and, for this reason, thought to be of viral nature, but not a single causal agent had yet been identified, mechanically transmitted, purified, or seen in the electron microscope. To promote further research on citrus diseases worldwide, the International Organization of Citrus Virologists (IOCV) was founded during the 1957 meeting in Riverside.

In October 2007, at the occasion of the 17th IOCV conference, we have celebrated in Adana, Turkey, the 50th anniversary of the foundation of IOCV in Riverside. During the last 50 years, research on graft-transmissible diseases of citrus by members of the IOCV community has led to the discovery that many of these diseases were indeed due to viruses, but others were found to be caused by new agents that were unknown in the 1950s, namely viroids and endogenous bacteria. A report of these 50 years of intensive work will be presented elsewhere. Here, I wish to look back and give a more personal account on some of the 17 events, which have been organized up to now, from the first conference in Riverside in November 1957 to the 17th in Adana in October 2007 (see table 1: 50 years of IOCV). I have to apologize to Anastasia Kyriakou for having missed the 15th conference, which was held in Cyprus in 2001.

The 1957 Riverside conference, dedicated to the memory of the great pioneer in the study of citrus diseases, Howard Samuel Fawcett, was organized by a committee headed by James Merrill Wallace, plant pathologist at the CES, who became also the first Chairman of the newly founded IOCV. Delegates from 13 countries attended the 1957 conference and presented 35 contributions. In those days, I was working on photosynthesis on the Berkeley campus. Henri Chapot, in charge of citrus in Morocco, came to Berkeley, and both of us drove to Riverside to participate in the citrus conference. I knew nothing about citrus and even less about citrus diseases. The Riverside meeting was a fantastic opportunity for somebody like me, having to work on…stubborn on my return to France, to learn about citrus diseases from the greatest authorities in the field. For each disease, the state of the art was summarized by an expert, and made it easy for ignorant participants like me to catch up. The paper presentations were followed by a four-day post-conference tour during which participants became acquainted with the California citrus industry and were able to see the symptoms of some of the diseases discussed in the paper sessions. These excursions were also most favourable for participants to get to know each other better and to eventually establish collaborative links.

1957, Citrus Experiment Station, Riverside, California
First Iinternational Conference of Virus Diseases of Citrus
Foundation of the International Organization of Citrus Virologists (IOCV)

In this way, I became particularly fond of Leo Klotz, Clair Calavan, and James Wallace. In the years to come, on my visits to Riverside, I would enjoy the hospitality of either one of them, and got to also know their families, of which I became equally fond! Dr. Klotz was one of the finest gentlemen I ever met. He and I liked photography. He had published one of the very first colour handbooks on citrus diseases; I was to edit, with Robert Vogel, the first IOCV slide collection on graft transmissible diseases. Clair Calavan, at first, had a more reserved attitude, but after a while he would warm up. He took everything very seriously and thoroughly. It would take him half an hour before he would answer a question you had asked him. By that time, you had forgotten the question, and you wondered what he was talking about! Later on, he and I cultured independently the stubborn agent, but we were never competitors, on the contrary. I remember with emotion the camping trips that the Calavans and I took together. James Wallace was flamboyant. Had he not been a scientist, he would have been an equally distinguished diplomat. Accompanied by the faithful R. J. Drake, he liked to take visitors around his greenhouse, showing them wound-induced woody galls as well as seedling yellows and how plants could recover from seedling yellows. He was also proud of the work he did with Martinez in the Philippines, showing that the Asian citrus psyllid was a vector of huanglongbing. Jim Childs, who had developed the first laboratory test for exocortis in Florida, was more rugged. In spite of the fact that he liked rifles and guns, and prepared his own bullets, I got along very well with him. In December 1959, four of us, Jim Childs, John Carpenter (from Indio, California), Georges Morel (from INRA, Versailles; he was the first to grow virus-free plants from shoot tips), and I drove from Paris to Rabat, and toured Morocco with Henri Chapot, looking for stubborn as far South as Agadir, where, suddenly, we saw, at some distance, strange looking objects, only to discover, when we approached, that we were dealing with…citrus trees wrapped up in fishermen's nets to protect them from being chewed up by millions of locusts. Following the 4th IOCV conference in Italy in October1966, we were back to Morocco, and had one of the most extensive post-conferences tours in the history of IOCV: first to Corsica by boat, then from Nice (French Riviera) to Valencia, Spain, by train, finally from Valencia to Casablanca, Morocco, by plane. The tour that ensued throughout Morocco has remained indelible in the memories of many participants. It was a hectic one, up at 6 or 7 am, in bed at 11 or 12 pm." No time for laundry", as Steve Garnsey complained! "No time for fried eggs at breakfast", as Jim Childs lamented! In the coach, no time for sleep, since Chet Roistacher or Josy Bové kept everybody awake, like it or not, with a guitare or a mouth harmonica. At Beni Melal, we were offered a formal, outdoor banquet, with a special

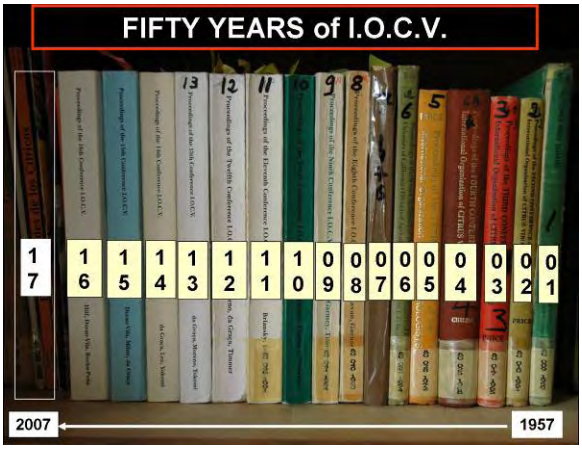
feature: a performance by the personal dancing company of the King. While the girls were doing their very special dances, Chet, still very young in those days, got up and started to belly-dance too! Lou Weathers, horrified, had to jump on him and get him down, thus avoiding a diplomatic incident… I wonder whether Chet remembers.

Another memorable post-conference tour took place after the 6th conference in Swaziland in 1972. Following the paper sessions at the Royal Spa Hotel and Casino of Mbabane, the capital of Swaziland, participants visited the citrus growing areas of three Indian Ocean islands: Madagascar, where African huanglongbing was present only on the cool, 1500m high, central plateau, Reunion where Asian huanglongbing and the Asian psyllid vector occurred from sea level up to 500m, while African huanglongbing and the African psyllid vector took over above 500m and up to 1500m, and Mauritius, less mountainous than Reunion, with citrus only up to 600m, but having also the two forms of huanglongbing and the two vectors. In Madagascar, sometimes unusual combinations could be seen, such as citrus trees and…baobab trees, side by side. In addition to the post-conference tour in these islands, there had also been a pre-conference citrus tour through South Africa. The idea of having the conference in Swaziland, with little citrus, rather than in South Africa, with lots of citrus (and "beautiful" huanglongbing) came from a discussion with my very good friend Johan Grobler, the director of the Nelspruit Institute for tropical fruit research. Indeed, there was a possibility that an IOCV meeting in South Africa would be boycotted because of apartheid, while boycott was not to be feared if the meeting was held in Swaziland. Since, however, South Africa had lots to offer regarding citrus, the pre-conference made it possible to visit South Africa for those who wished. It turned out that a great majority of IOCV members came to the pre-conference tour. Professor Oberholzer, who did not like the Swaziland idea, expressed his discontent by saying that "IOCV entered South Africa through the black door"! I was very happy to see Johan Grobler in good health in October 2006, while visiting South Africa again. I reminded him of the inauguration ceremony of the Mbabane conference. It was the first and, so far, the last IOCV conference to be opened by a … king. Johan Grobler has taught me a few words in Swazi, the tongue of the Zoulous, for me to say at the inauguration ceremony (I happened to be chairman of IOCV at that time). Hence, after the king of Swaziland had spoken, I answered him in Swazi and finished in saying:"O lion of Swaziland, I salute you". At first, my words were greeted by long seconds of deadly silence, but then, to my surprise, a thunderous applause exploded: it was the first time in the short history of independent Swaziland that a white man, in official matters, addressed the king in his language rather than in English.

50 years of IOCV:

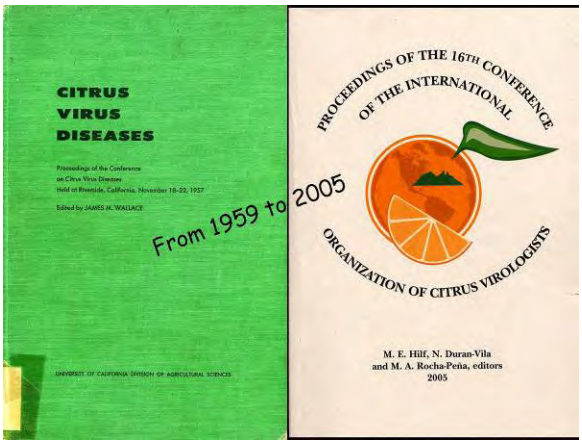
17 conferences	17 chairpersons	
1st. Riverside, California, USA	1957	J.M. Wallace
2nd. Lake Alfred, Florida, USA	1960	T.J. Grant
3rd. São Paulo, BRAZIL	1963	V. Rossetti
4th. Rome, Palermo, Catania, ITALY	1966	G.A. Scaramuzzi
5th. Tokyo, Shizuoko, Kyoto, Wakayama, Matsuyama, Hiroshima, JAPAN	1969	J.M. Bové
6th. Mbabane, SWAZILAND	1972	E.C. Calavan
7th. Athens, GREECE	1975	L.G. Weathers
8th. Mildura, AUSTRALIA	1979	S.M. Garnsey
9th. Iguazu, ARGENTINA	1983	A.A. Salibe
10th. Valencia, SPAIN	1986	L. Navarro
11th. Orlando, Florida, USA	1989	C.N. Roistacher
12th. New Delhi, INDIA	1992	A. Catara
13th. Fudzou, Fujian, CHINA	1995	Richard Lee
14th. Campinas, S.P., BRAZIL	1998	P. Barkley
15th. Paphos, CYPRUS	2001	P. Moreno
16th. Monterrey, MEXICO	2004	J. da Graca
17th. Adana, TURKEY	2007	N. Duran-Vila

Jim Childs has written in his preface to the proceedings of the 4th (1966) IOCV conference in Italy: "the post-conference tour added immensely to the success and the information yield of the Conference". I could not agree more with these words. However, it was not always easy to organize these events. After the 4th conference in Italy, Shoichi Tanaka, an emeritus professor from the Tamagawa University in Tokyo and a faithful participant of the three previous conferences, insisted that the 5th conference be organized in Japan in 1969. In 1967, I took a trip to Japan to attend the International Biochemistry congress (where the structure of the ribosome was to be revealed), and used this opportunity to visit with Shoichi Tanaka the various citrus areas and islands of Japan. I discovered to my surprise that our Japanese colleagues, except S. Tanaka, were not eager to host the IOCV conference, but they would not say why. So, at one of the very last banquets, I decided to play my last trump: giving many toasts with sake wine to my Japanese hosts! The many



"bottom up" glasses of sake loosened the tongues, and the problem could be solved! Instead of having only one organizing committee, with only one chairman (S. Tanaka!), we had several committees, with several chairmen, making everybody happy, and the 5th conference did occur in Japan in 1969, with citrus visits all over the country and innumerable receptions and banquets everywhere. It was a marvellous experience. On our way back home, quite a few of us stopped in India to pay a visit to Prof. Capoor in Puna, East of Bombay, to see his nice work on the transmission of the huanglongbing agent by the Asian citrus psyllid. He offered me a potted Mosambi sweet orange seedling, which he had experimentally infected with the huanglongbing agent by Diaphorina citri psyllids. This is the origin of our Puna strain of huanglongbing, with which we have carried out most of our work on Asian huanglongbing, and which is still in the greenhouse. I dedicated to Prof. Capoor my 2006 review on huanglongbing, published in Giovanni Martelli's Journal of Plant Pathology.

Another difficult IOCV conference to organize was the 7th one in Greece in 1975. The conference was planned to be held in Cyprus, and by 1974 all the arrangements had already been made, hotels were reserved, etc., thanks to another faithful IOCV fan: Costas Manglis who was a personal friend of archbishop Makarios, the President of Cyprus. But then, a coup favourable to Greece occurred, and, as a result, Turkish troops landed on the island. This was of course the end of the IOCV meeting in Cyprus (I am happy that, eventually, the 15th IOCV conference could be organized by Anastasia Kyriakou in her beautiful island, where Aphrodite-Venus was born from the foam of the Mediterranean waters). As chairman of the committee for organizing the 7th conference, I had to find another place. Fortunately, Greece was willing to take over, and the Greek Ministry of Agriculture sponsored the conference. Finally, the 7th meeting of IOCV opened in Athens on September 29, 1975, and was followed by a tour to several Greek citrus areas. The meeting in Athens and the citrus tour in Greece was preceded by a pre-conference tour in Israel, well-attended by many delegates, and including such sites as Hibbat Ziyyon, Hamaapil, Lake Tiberiad, Zemach, Rehovot, the Volcani center, Saad, Jerusalem, Tel-Aviv and the Negev. A post-conference tour to Lebanon and Egypt, after Israel and Greece, was supposed to put an end to the 1975 IOCV events. But then, politics, once again, interfered with our program! A civil war started in Lebanon, and instead of looking at citrus in this ancient Phoenician land, we had to kill three days before arriving, right on time, in Egypt. We not only saw citrus in the Nile delta, but also one of the seven wonders in the world: the three pyramids of Guiza, near Cairo. While in Egypt, many delegates, exhausted by IOCV, had to take a week of vacation, and toured such places as Alexandria, Cairo, Luxor and Karnak, Esna, Edfou and Kom Ombo, Aswan and the new dam, lake Nasser and the relocated temple of Abu Simbel.



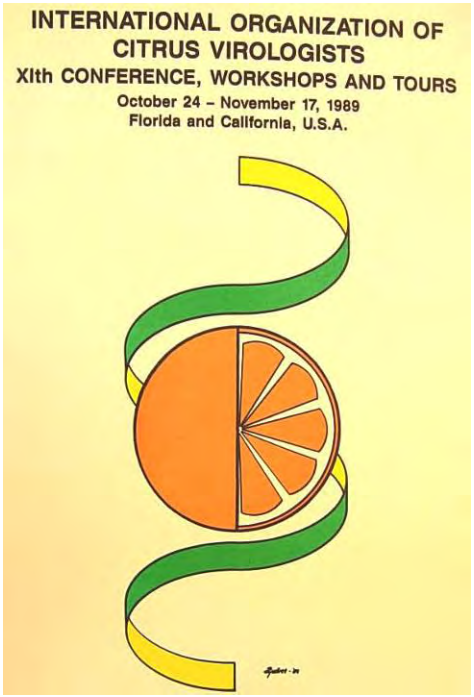
The 9th IOCV conference at the famous Iguazu cataracts in Argentina in 1983 was the only one that was held four years after the previous one (in Australia), instead of the usual period of three years. This time, the war between Argentina and Great Britain for the Malvinas islands in 1982, made us postpone the

conference by one year. In those days, the French were very popular in Argentina because France had supplied the Argentinean navy with a famous rocket called Exocet, which often hit the target and that had enabled the Argentinean pilots to sink a large ship of the English army named Sheffield. In our visit to Corrientes we had an opportunity to see a brand new cafeteria called Exocet, likely to encourage the local pride after this unfortunate war. As to the conference in this beautiful hotel overlooking the cataracts, it occurred under floods of rain; the falls being so swollen that their furious waters had carried away most pedestrian walking trails constructed over the falls. The rain being so heavy all day around and woth no trails over the falls, the paper sessions reached some of the best attendances ever seen. Many of the citrus areas to be visited during the post-conference tour were flooded and inaccessible. Fortunately, when we arrived in Buenos Aires the weather had improved, and it was a pleasure to discover this beautiful city under sunshine, listening at nostalgic tangos while admiring the dancers…This brings back to my memory another unique musical performance, which the 10th IOCV conference in Spain in 1986 allowed us to discover: flamenco in the gipsy quarter of Granada, after having admired the Alhambra palace and the Generalife gardens. Today, you have to be on a waiting list if you wish to visit these places…And the participants of the Adana Conference will undoubtedly remember that, for the first time in 50 years, the IOCV meeting did not open with a speech, but with a concert of classic music, including Mozart's "Eine kleine Nacht Musik".

50 years IOCV…People (from top left):
L.G. Weathers, L.W. Timmer, S.M. Garnsey, A. Salibe, A. Catara
L. Navarro, H. Tanaka, V. Rosseti, M. Bar Joseph, J.M. Bové
G. Müller, P. Moreno, C.N. Roistacher, J.S. Semancik, M. Cambra

The 1983 conference in Argentina was preceded by a pre-conference in Brazil. This was the second time that IOCV was welcomed in the country, which has become today one of the leaders in citrus. Our first visit to Brazil occurred early in the life of IOCV: in 1963, at the occasion of 3rd conference. I visited the country for the first time in 1959, coming from California, on my way back to France, and being invited by Victoria Rossetti to look at citrus. This is when I saw for the first time Niki Naday's orchard at Sete Lagoas, to become one of the most beautiful citrus farms in São Paulo state. Victoria was working at the Instituto Biologico in São Paulo city in the department of plant pathology, founded by Agesilau Bitancourt, who is often said to be the "father" of plant pathology in South America. I met him for the first time on my1959 visit, and soon, we became very good friends. He had been taken, at a very young age, to France, where he received his primary, secondary and higher education. Both of us attended the same School of Agronomy in Paris; he entered the school in 1917, I was accepted in 1950. After having married Christiane, a distinguished French Lady from Paris, he came back to Brazil. He was essentially a mycologist. I loved to take up various issues with him, just for the sake of arguing. We spoke French, and at moments, in the heat of the discussion, the tone went up and we would reinforce our voices with our hands to make our points stronger. We did

scare our fellow IOCV members, ready to jump between us, hoping to prevent a battle. But then all of a sudden to their surprise, they would see the two of us go away, arm in arm, the argument having come, temporarily, to an end … The 1963 IOCV conference has remained in everybody's mind because it was there that Elliot Kitajima showed for the first time citrus tristeza virions. After the conference, I stayed for six further months in Brazil, teaching a course in biochemistry at the Instituto Biologico, and Victoria teaching me diseases of citrus, all over Brazil. After the 1963 conference and the 1983 pre-conference, IOCV came back to Brazil a third time, in 1998, to hold the 14th conference in Campinas. This was a time when psorosis ophiovirus, if not spirovirus, and leprosis virus had pushed citrus variegated chlorosis away from the front page, but citrus sudden death and huanglongbing had not yet exploded. IOCV will be back in Brazil soon, in 2010 for the 18th conference, as was decided, last October, at the 17th conference in Adana.



As indicated above, Victoria Rossetti and I would meet essentially in Brazil, but at one time, in 1979, we came across each other in a most unexpected place: Easter island, more or less in the middle of the Pacific Ocean, half way between Chili and French Polynesia! We were on our way to Australia to attend the 8th IOCV conference in Mildura. I was with my friend and colleague Robert Vogel, Victoria was accompanied by Ralph Schwartz and Maria-Theresa Argüelles. Our worst problem on the island was food! For breakfast, lunch, and dinner, we had only…lobster, lobster, and lobster. After three days of lobster, Vogel and I continued our voyage to Tahiti, where tristeza had been introduced less than a year ago, with quick decline at its best. The 8th IOCV conference in Australia took us from Sydney southwards to Canberra; next, we went westwards to the Murrumbidgee and the Murray River valleys and their citrus problems, to Mildura where the paper sessions were organized, and to Adelaide where the conference finished. We travelled by coach, the driver having a double job: manoeuvring his bus and, at the same time, being an excellent tourist guide, speaking into his microphone while driving. At one stage, we were chasing kangaroos. These beasts were running, or rather, jumping in front of our coach, and the coach was trying to catch up with them. At some other time, we were shown how to shear sheeps, and how fast it could be done.

I suddenly realize that haven't said a word yet on the 2nd, 11th, 12th, 13th, and 16th conferences. It would be unfair to skip them, and so you have to bear with me for some more time. After the first conference in California, the second IOCV conference in 1960 had of course to be organized in Florida, and more precisely at Lake Alfred. Scientifically speaking, two new subjects made the front page. (i) It was the first time that, at an IOCV meeting, a citrus agent was reported (by Grant and Corbett) to be mechanically transmissible not only to citrus hosts, but also to non-citrus hosts: the agent of infectious variegation (to be identified later as an Ilarvirus). (ii) Impietratura was reported for the first time by Gaetano Ruggieri from the citrus experiment station in Acireale, Sicily. Today, 47 years later, we still do not know the etiology of this graft transmissible disease. Prof. Ruggieri attracted much attention for another reason. He was accompanied by his daughter, and she was a very beautiful young lady. However, many of us became much frustrated because, chaperoned by Prof. Ruggieri, she could not be approached nor complimented... We went back to Florida for the 11th conference in 1989, this time in Orlando. In addition to citrus, other attractions were, of course, Disney world, Sea world, Universal studios, etc. But I also remember, at the last paper session, a very hearty discussion on huanglongbing…

Seven IOCV conferences have been held in America: one in California (1957), two in Florida (1960, 1989), two in Brazil (1963, 1998), one in Argentina (1983), and one in Mexico (2004). The

paper sessions of the Mexico conference were given in Monterrey, following a beautiful welcome-reception with Mexican singing and dancing, recalling in particular the pre-Columbian era, the struggle for independence in the 18th century and the 1910 revolution. A pre-conference citrus tour had taken the participants to the Lower Rio Grande Valley of south Texas, and a post-conference tour took them to Martinez de la Torre, north-east of Mexico city to see Persian lime orchards, but also the archaeological site of El Tajin and its famous pyramid. On the way back home, being in the Capital, how can one resist the pleasure of visiting the National Museum of Anthropology, unique in the world, spending some time in the Palacio de Bellas Artes, looking at the huge frescos of Mexico's famous painters such as Rivera, going to nearby Coyoacan suburb on pilgrimage to Frida Khalo's "Casa Azul". Frida, the tumultuous wife of the no less tumultuous Rivera, was herself a great painter, an active feminist, a pro-Indian activist, and, in addition, a communist, with Trotsky as a friend… In Mexico, some of the most famous archaeological sites, such as Chichen Itza and Uxmal, have so-called Archaeological villas, i.e. excellent small hotels right on the site of the ruins.

50 years IOCV… Farewell to Dear Friends & Colleagues (from top left):
J.M. Wallace, R. E. Schwarz, E.C. Calavan, M. Garnier-Semancik, R. Vogel
D. Gumpf, T. Grant, J. Gil, A. A. Bitancourt, J. F. L. Childs
S. Moreira, M. Cohen, L. C. Knorr, A. P. D. McClean, L. Klotz, F. Nour Eldin

Teotihuacan, near Mexico city, has one too, and this made a good excuse for some of us to see once again the famous Aztec pyramides of the sun and the moon. What can compete with these imposing constructions? The Great Wall of China! Who has not dreamed of the Wall? For scientists, the Wall has something special, which would make it a perfect site to hold poster sessions. Indeed, the Wall is the only construction on earth that can be recognized from the…moon, and thus, to flatter our ego, our poster would also be seen from the moon!
The 13th conference in China in 1995 was not held on the Great Wall but in Fudzou, Fujian province, the home of Prof. Ke Chung's laboratory. The conference was dedicated to a true pioneer in the study of huanglongbing: Lin Kung Hsiang (1910-1986). He was the first to show and publish, as early as 1956, that huanglongbing was a graft-transmissible disease. His work was also reported in "Revista de Agrumicoltura" in 1957 in Italy by Prof. Antonio Ciccarone (1909-1982) who visited Lin in China in 1956. In spite of this clear-cut report, the work of Lin remained essentially unknown in the western world. As Lin used the term "huang long bing" (yellow shoot disease) in his publications, and since he was the first to demonstrate the transmission of the disease by graft inoculation, the name huanglongbing has priority over all other names including greening. After the paper sessions in Fudzou, the postconference tour took as first to Chengdu, Sichuan province, and later to Chongqing and the Citrus Research Institute at Bei Bei, with some tourism in-between. The most famous Dazu Rock Carvings, built from 650 in the Tang Dynasty and continued to the Ming Dynasty (1368-1644) and the Qing Dynasty (1616-1911) were particularly interesting. Among the rock carvings, there are more than 5,000 statues and over 100,000 Chinese characters of inscriptions and epigraphs. The Buddhist statues dominate, but the Taoist and the Confucian stone figures can also be

seen. Chongqinq is also famous for its winter fog, and it is said that dogs start barking when the sun appears. The city had a miserable airport as late as 1995. We came back there in 2005 with a group of Brazilian colleagues, learning about huanglongbing. The place was hardly recognizable, a brand new airport, surrounded by brand new skyscrapers having mushroomed in the meantime.

I have saved until last the 12th IOCV conference in New Delhi, India, in 1992. The 12th conference was supposed to be held in Thailand, but for some reasons, at the very last moment, a replacement for Thailand had to be found. It so happened that since 1990, my laboratory and the laboratory of Prof. Anupam Varma at the Indian Agricultural Research Institute (IARI), New Delhi, were involved in a collaborative project on huanglongbing in the frame of the Indo-French institute for the promotion of Advanced Research. Since 1990, during one month each year, Dr. Monique Garnier and I had been surveying India's citrus areas for huanglongbing with molecular techniques. Thus, being well acquainted with the country, and having Prof. Varma's support, we proposed to organize the 12th conference in India. During Prof. Varma's visit to Bordeaux, we built the scientific program, and on November 23, the conference began in the auditorium of the IARI with over 150 delegates from 22 countries. An additional reason pled for organizing the 12th conference in India: it made it possible for participants to see one of the worst diseases of citrus, if not the worst: witches' broom disease of lime (WBDL), which we had discovered in 1986 in the Sultanate of Oman, and which we showed to be due to a phytoplasma, *Candidatus* Phytoplasma aurantifolia. Hence, a pre-conference tour to Oman was organized by Dr. Mjeni, advisor to the Omani Minister of Agriculture, and myself. The 23 participants for the pre-conference tour gathered in New Delhi and left together for Oman. Visits were made all along the coastal orchards, up to Sohar, the home of Sinbad the Sailor, and further up North to El Morer, Shinas and Liwa. The extreme destructiveness and rapid spread of the disease struck everybody. After three days of visits, all accommodations and bus travel being provided by the Omani government, the participants returned to New Delhi by air. Such a visit would have been very difficult to organize without IOCV. After the paper sessions, a post-conference tour to Bangalore and the Coorg area allowed participants to see symptoms of ringspot, huanglongbing, mosaic, citrus canker, and to witness the work done at various Indian agricultural research institutions.

It is amazing how much we have learned from IOCV conferences, not only professionally, but also from the human point of view. IOCV has widened our horizon. It has pushed us to strive for quality with respectfulness to others. It has created a spirit of mutual cooperation, friendship, and trustfulness. Even though exchange of scientific information remains the first objective of IOCV conferences, we must not loose the humanistic philosophy, which underlies our organization since fifty years. Long live IOCV!

Nomination of Fellows of the IOCV.

Proposal for the Nomination of Dr. Pete Timmer

Mani Skaria

I am writing this letter nominating **Dr. Lavern W. (Pete) Timmer** for consideration for the **IOCV Fellow, 2007.** It is my pleasure and an honor to write supporting a truly deserving scientist whom I know well and consider a role model.

Pete Timmer

Dr. Pete Timmer is an outstanding scientist of international repute and a member of IOCV for many years . In May 2007 he retired as a citrus pathologist and professor from the University of Florida's Citrus Research and Extension Center, Lake Alfred, FL. after a well-distinguished career of 29 years in Florida. Timmer's breadth of expertise and range of skills include diseases which the IOCV is dedicated to: tristeza, tatter leaf, exocortis, psorosis, ringspot, and in addition he has major expertise in fungal and bacterial pathogens of citrus. In more recent years, he was very active as an extension specialist. His career in citrus pathology has spanned from **Anthracnose to Xanthomonas** and from a farm in West Olive, Michigan to Argentina, with an eight year stint in Texas in the 1970s. He has served as a mentor for numerous young scientists. His citrus

work also took him to Australia, Asia and Africa. His peers have recognized him with numerous awards, including the Fellow (2000) and the Lee Hutchin's awards from the American Phytopathological Society, an endowed distinguished professorship at CREC in 2006 and a distinguished research professor at the University of Florida, Gainesville, 2003. In 1989, IOCV members honored him with a special award for exceptional research. Perhaps, a lack of enough problems in citrus made Pete an avid bird watcher who has identified more than 570 bird species in North America and over 2,200 species in other countries.

Dr. Timmer served as the secretary of IOCV for a decade, starting in 1986. He was an editor of the IOCV proceedings for five consecutive issues, starting in 1980. In addition, he has been an editor for both Phytopathology and Plant Disease, editor of both the Rio Grande Valley and the Florida Horticultural Societies in Texas and Florida, respectively. He was an editor of three editions (two in English and one in Spanish) of the APS Compendium of Citrus Diseases.

His contributions to organization and the mission of IOCV include:
- A decade of dedicated work as Secretary of IOCV (1986-95)
- An editor of the IOCV Proceedings, 1980-1993 (8th-12th)
- An enthusiastic reviewer of IOCV manuscripts
- A contributor towards the possibility of a natural spread of psorosis
- Developed new information on citrus ringspot disease and its mechanical transmission
- Role of root grafting in blight transmission and developed diagnostic tests for it
- Citrus greening educator
- A winner of the IOCV exceptional research award (1989).

Dr. Timmer's extraordinary research has and will continue to contribute towards the management of citrus diseases caused by fungi, bacteria, viruses, and nematodes. In a rapidly changing global economy, scientists like Timmer with a global perspective are a great asset for a technology-based disease management. I request you to consider the nomination of Dr. Pete Timmer for the IOCV Fellow, 2007. Thank you.

Proposal for the Nomination of Dr. Luis Navarro

Chet Roistacher

I am writing this letter nominating **Dr. Luis Navarro** for consideration for the **IOCV Fellow, 2007.** It is an honor and pleasure for me to write about the contributions of Luis Navarro to IOCV and to the world of citriculture. I have had the pleasure and privilege of working with and knowing Luis over the past 38 years.

Luis Navarro

If there was only one reason that Luis Navarro deserves the nomination as a Fellow in IOCV it would be for his contribution of his outstanding work on the elimination of graft-transmissible pathogens from propagative budwood by the technique of shoot tip grafting *in vitro*.

This contribution is undoubtedly the most significant development ***ever*** in the history of therapy for the elimination of graft transmissible pathogens in citrus. By this technology, pathogens which could not be eliminated by thermotherapy such as viroids, were readily eliminated by shoot tip grafting. Shoot tip grafting had virtually eliminated the need for going through the nucellar as a means of ridding citrus of pathogens. Prior to 1975, the nucellar was the only way to bypass citrus viroids but were many problems associated with the nucellar and all were solved by this new innovative technology.

By decapitating the microscopic growing tip of a young shoot with a rapid stroke of a razor blade sliver, and then grafting this almost invisible tip onto a toothpick sized seedling, the course of citrus virology and citrus industries worldwide was dramatically altered. This new procedure eliminated most, if not all, of the known graft-transmissible pathogens of citrus and succeeded in the production of virus-free citrus trees with subsequent savings of

many millions of dollars to citrus growers worldwide.

After his intensive research at the University of California at Riverside with Dr. T. Murashige he published the paper *"Improvement of Shoot Tip Grafting in Vitro"* in the Journal of the American Society for Horticultural Science. This paper was given the prestigious Wilson Popenoe Award as the outstanding publication for 1976.

Luis Navarro returned from California to Spain in 1975 and assumed the directorship of the newly created department for the development of certified citrus. This department was founded and based on the new technology he had helped create. At that time, due to tristeza, the Spanish citrus industry was suffering from severe decline of their citrus industry on the predominantly sour orange rootstock. Also, at that time most all of their citrus, when indexed, was found infected with many pathogens - but specifically many viroids. By a rigid program of shoot tip grafting and indexing, new pathogen-free citrus was developed and entered into a working certification program. Navarro and his committees were instrumental in reducing the number of nurseries from over 1000 to just 9 cooperatives who were to receive the newly developed lines of citrus. He helped develop new quarantine procedures for Spain and he developed a new procedure of culturing imported budwood *in vitro* at 32ºC, which produced flushes in 10-14 days, from which shoot tips were excised and micrografted *in vitro*. This new procedure was published in the 11th IOCV proceedings.

Transplanting the first STG plant

The results of his efforts was for the Spanish citrus industry to go from 2 to 35 million virus-free trees in the 10-year period 1982-1992. Also, in just 6 years (1982 -1988) the percentage of citrus in Spain produced from shoot tip grafted virus free buds went from 40 to 100%.
By his leadership many pathologists were brought into his department and we recognize them today as leaders in our field and active members of IOCV. His department has steadily grown with increased funding, new buildings, facilities and new staff, which has made IVIA today the leading center for citrus virology in the world.

Luis has done much for IOCV. He has consistently attended all conferences of IOCV since 1975. He was elected Chairman of IOCV for 1986- 1989. He was chairman of the outstanding organizing committee for the 10th conference of IOCV in Spain with the post conference in Sevilla in south of Spain. This conference and post conference trip will long be remembered by those who attended for its warmth and hospitality shown to the IOCV participants. He was editor of the 10th proceedings and actively participated all meetings of IOCV, in presentation and publication of numerous papers in the proceedings or IOCV. He has consistently contributed to motions and discussion at all business meetings, reviewed manuscripts and continually sent comments to the various chairpersons. In 1989 Luis specifically flew to California with the objective of urging a post conference trip to be held in California. I can personally testify that without his strong arguments presented at a special meeting there would not have been a post conference in California in November of 1989.

The list of accomplishments and honors received by Dr. Navarro would fill a book. Suffice to say that Luis Navarro deserves the honor of Fellowship in the International Organization of Citrus Virologists.

Proposal for the nomination of Victoria Rossetti as a Fellow of IOCV.

Josy Bové

Unfortunately, if **Verediana Victoria Rossetti** becomes a fellow of IOCV, she will never know that this honor has been bestowed on her. She suffers from Alzheimer's disease since several months and, on my last visit to her in May 2007, for the first time she did not recognize me any more. This came to me as a shock, as on my previous visits, once or twice a year, a smile would illuminate her face on catching sight of me.

Victoria Rossetti
First Lady Agricultural Engineer in Brasil

Victoria was one of the most charming persons at IOCV, always full of enthusiasm, truly excited when something new came up, eager to get into it, and happy to collaborate. IOCV was her family, and she loved IOCV as much as her own family. From her first IOCV meeting in Florida in 1960 to the 14th in Campinas in 1998, she missed only one.

She was deeply involved in organizing one of the first IOCV congresses, the one in 1963 in São Paulo and Campinas, Brasil, where she was elected chairwoman of IOCV. As such, she took an active part in organizing the 4th IOCV meeting in Italy in 1966. In order to be able to follow the preparation of this event, she managed to get a sabbatical position at the FAO Plant Protection Bulletin in Rome, where I went to see her several times and supported her efforts to get everything going. In 1983, the 9th IOCV conference was held in Argentina, with a preconference in Brasil. Guess who organized the preconference? Victoria! During the precongress, the 25th anniversary of IOCV was celebrated through various activities. Her last involvement in IOCV matters was at the 14th IOCV conference in Campinas. Dra. Rossetti was very proud of the many awards she received during her carrier, including a James Merrill award of IOCV.

Victoria's mentor was Agesilau Bitancourt, who, at one time, was director of the Plant section of the Instituto Biologico in São Paulo city, and in charge of the plant pathology laboratory. A mycologist, he was one of those who introduced plant pathology into South America. Victoria was trained as a mycologist, but she became interested in all aspects of citrus diseases and tried to associate in the same experiment both fungi and graft-transmissible agents. We all remember her papers on phytophthora inoculations and the reactions of exocortis infected trees, lemon trees infected with rumple, or Pera sweet orange trees preimmunized against tristeza. She was not confined in her laboratory at the "Biologico", but enjoyed going out in the orchards, looking at symptoms and planning field-experiments. She had a particular gift for "smelling" new diseases. At the 5th IOCV meeting in Japan in 1969, she reported on a new type of decline of citrus trees in São Paulo state. This so-called "Araraquara" disease reminded her of greening, and she applied the fluorescent test developed by Ralph Schwarz to diseased material, however without getting conclusive results. It is however remarkable that when huanglongbing was eventually identified in the Araraquara region in March 2004, everybody remembered Victoria's Araraquara disease. It is unfortunate that, in 2004 already, Victoria had become unable to answer questions on this mysterious disease, which will probably remain mysterious for ever. On one other occasion Victoria suspected greening, namely when she saw the leaf symptoms of what is now called citrus variegated chlorosis (CVC). She sent glutaraldehyde-fixed leaf-midribs to my laboratory in Bordeaux for us to find the greening bacterium in the sieve tubes. Monique Garnier did find bacteria, but in the xylem, and they were *Xylella fastidiosa* cells! The entire work was presented at the 12th IOCV in Delhi.

At the 8th IOCV meeting in Australia in 1979, Victoria and coworkers, including Jim Childs, presented a paper on another new disease in Brasil: "declinio", reported by Ody Rodriguez *et al*. the same year. She suspected Florida "Blight", and this

time she was right. At the 11th IOCV meeting in Florida in 1989, V. Rossetti, M. J. G. Beretta, and A. R. R. Teixeira, confirmed the results published in 1984 by D. P. H. Tucker, R. F. Lee, L. W. Timmer, L. G. Albrigo, and R. H. Brlansky, namely that blight was transmissible by root-grafts.

Leprosis has been and still is a major disease of citrus in Brasil. Leprosis has been one of Victoria's favourite diseases, and in particular transmission of the leprosies agent by Brevipalpus mites. At the 9th IOCV conference in Argentina in 1983, Chagas, Rossetti and Chiavegato showed that larvae were more efficient vectors than nymphs and adults. Chagas and Rossetti also succeeded in transmitting the leprosis agent by graft inoculations. However, the symptoms on the receptor plant remained localized at the grafting region, in accordance with the fact that the leprosis virus does not become systemic on citrus. At the 19th IOCV conference in China in 1995, Victoria presented a review paper on transmission of citrus leprosis. Finally, in collaboration with prof. Lovisolo who spent quite some time in Victoria's laboratory, she became interested in the leprosis virus itself, and at the China meeting, the team presented data on the mechanical transmission and the partial characterization of the leprosis rhabdovirus. This work was followed at the 1998 Campinas IOCV meeting by "the preliminary purification and double stranded RNA analysis of citrus leprosies virus".

The last IOCV publication authored by Victoria is in the proceedings of the 1998 14th IOCV conference in Campinas, and is entitled: "Citrus variegated chlorosis (CVC) in Brasil , an overview".

All together, Victoria has published 28 papers in 11 IOCV proceedings. She was a faithful member of IOCV. She spent the last years of her professional life on writing a book on diseases of citrus, which appeared in 2001 under the title: "Manual Illustrado de Doenças dos Citros".

We at IOCV will be honoured by counting Veridiana Victoria Rossetti as one of our Fellows.

I feel sorry for having written these lines in the past tense. It is because I wish you to remember her as she was, not as she is.

Visit to Victoria Rossetti

Josy Bové, La Brède, March 4th, 2008
On Saturday, February 29, 2008, I paid a visit to Victoria Rossetti in her apartment on the 20th floor of a high-rise in the city of São Paulo. The week before, during my stay in Brazil, I had received from Georgios Vidalakis, the IOCV secretary, the beautiful plaque shown below, indicating that Victoria had been designated "Fellow of IOCV". The plaque was signed by Nuria Duran, the Chairwoman of IOCV.

When, during the 17th conference of our Organization in Adana, Turkey, the designation of Fellow was conferred on her, we knew that Victoria, affected by Alzheimer's disease, would probably never become aware of the honour that was bestowed upon her. However, we hoped that the sight of the plaque would bring back to her mind the memories of similar events, such as receiving the "Wallace" award. The hopes were not too high, since, when I saw Victoria for the last time, in May 2007, she did not recognize me any more.

When I saw Victoria, last Saturday around noon, she was not seated in her wheelchair, as usual, but rested in her bed, cared for by her housekeeper and a nurse. I walked close to her. She looked at me without any sign on her face, probably not recognizing me. I started to talk French, the language we always spoke when together. I presented her with the plaque and started to tell her what it was all about. I kept talking, switching to huanglongbing and how it spread all over São Paulo state, speaking of citrus and diseases. All at a sudden, she grabbed the plaque with her two hands, started to breathe more quickly,

her chest going up and down, as overcome with emotion, and said, loud and clear, in French: “très important”, *i.e* “very important”. Undoubtedly, something came back to her mind. The nurse and the housekeeper were sure that Victoria had recognized me. I am not so sure, but the fact that she said a couple of words in French, the only two words she spoke, means that at least a little fragment of the past came back to her. Soon, she closed her eyes, probably exhausted by what had happened, and fell asleep. With a last glance at Victoria, I slid out of the room.

IOCV Business Meeting

AGENDA OCTOBER 23, 2007
1. Welcome
2. Memoriam for deceased IOCV members
3. Approval of minutes of the 2004 Business Meeting
4. Report of the Secretary
5. Report of the Treasurer
6. Report of the Slide Collection Committee
7. Wallace & Gumpf Awards – by-laws amendment
8. Schwarz fund/ Fund raising committee creation
9. Proceedings :
   a.Distribution/sale of copies of 7th-16th
   b.Publication of 17th proceedings
10. IOCV Fellows
11. Conference venue 2010 (and 2013?)
12. Other business
13 Closing

Minutes by Georgios Vidalakis
1. Welcome: The Chair John Da Graça welcomed everybody to the business meeting

2. Memoriam for deceased IOCV members: A moment of silence was held for John Moll from South Africa and Francisco Martí Fabregat from Spain.

3. Approval of minutes of the 2004 Business Meeting: Members read through the minutes from the Mexico November 11 2004 meeting. P. Moreno recommended a change in point (6) of the minutes “a minimum of 2 new people” to” maximum of 2 people”. R. Yokomi moved to accept the change P. Moreno seconded, motion passed unanimously.

4. Report of the Secretary: C. Roistacher secretary made the following comments:
A. Overall the IOCV maintained the membership numbers with some peaks depending on the years.
B. Probably a mistake was made in buying few too many volumes of proceedings of some years.
C. The cost of the proceeding volumes storage is $486 per year so we need to find a way to move them out.
D. Libraries have been contacted in USA but no requests were made for any volumes so far. No international libraries have been contacted.
E. The scanning/digitalization process of the volumes has already begun.
Da Graça commented that the last three (3) proceedings were received from the publishers as PDF files and have been posted on the web. The remaining volumes are being scanned at Riverside and Dr. Wallace’s daughter donation helped the scanning procedure. Motion by G. Pietersen to continue the scanning and online posting of the proceedings Mark Hilf seconded, motion passed unanimously.

5. Report of the Treasurer: Da Graça reported that R. Krueger could not attend the 17th IOCV in Turkey. The members read through the treasure report (see below). M. Skaria asked if IOCV pay taxes. C. Roistacher responded that the IOCV income from proceedings etc is tax-free and that the IOCV money is in bonds and that income is also tax free. M. Skaria moved to accept the treasurer report, R. Yokomi seconded, and motion passed unanimously.

Report of the Treasurer, Prepared by Robert R Krueger
FY 2007 saw a few changes in IOCV finances. There are basically two sources of funds within IOCV: the checking account and the investment account

In the checking account, the major sources of income have been Congress registrations, page charges for the Proceedings ($20,821), member dues, and orders for proceedings (approximately $3,088 for the 16th to this point, including the shipping charges). At this time, we have received few institutional orders for the latest Proceedings for reasons unknown.

The major expense in this time period has been the printing of the proceedings ($19,560). More recently, the digitation of the older proceedings has cost approximately $5,560 to this point. Note that at this time, volumes 11 – 13 have been completed and posted on the server at IVIA and volume 10 is mostly complete. Other fairly significant expenses include storage of proceedings ($486 PA), mailing of the proceedings to Congress participants ($622), and VISA terminal rental and fees (usually about $50 per month).

As a result of these incomes and expenses, the checking balance decreased from $20,044 on 01/01/2007 to $5,078 on 12/31/2007. Note that the beginning balance was high due to having completed receipts of page charges and the ending balance was low due to the large expenditure for printing.

The other main source of funds for IOCV are the investments. These are basically the funds used to establish the various awards and the interest income, along with a small

IOCV savings fund. The current investment is in a Dreyfus Premier CA Tax Exempt Bnod Fund Class A. The amount in the Dreyfus fund was $47,003 on 01/01/2007. The only funds drawn from the investment were approximately $1,150 for the Wallace Award and its associated plaques, awarded at the 2007 Congress. This was partially offset by the dividends received, so the ending balance on 12/31/2007 was $46,785. This was allocated as follows: Wallace fund $20,081 (43 %), Schwartz fund $10,988 (23 %), Gumpf fund $4,778 (10 %), and IOCV $10,688 (22 %).

6. Report from the Slide Collection Committee: N. Duran reported that they are re-shooting and digitalizing the old IOCV slides in collaboration with the committee of P. Moreno, J. Bove, S. Garnsey and C. Roistacher. So far they have: i. A list of the general collection, ii. A list with the necessary changes in the slides, iii. A list with the new findings/disease updates, iv. A list with people to be contacted for participation/submission of pictures. J. Bove recommended starting with a disease like cristacortis that there is not much to update in order to develop a new format for the slide collection. Timmer, Milne, Barkley, and Gottwald have been very helpful providing disease information. M. Machado recommended to the committee to include mineral deficiencies as mistaken disease items. N. Duran is working to post on line histories and data from citrus producing countries. Countries have been divided to 3 different sizes big, medium, and small. At this point only Anastasia (Cyprus) and Pat (Australia) have responded to the request for information. J. Da Graça asked for volunteers from countries represented in the Conference: USA will be represented by the states: Arizona, California, Florida, Texas, Hawaii, Louisiana, Alabama, and Mississippi. Volunteers, M. Hilf (Florida), J. Da Graça (Texas & Louisiana), G. Vidalakis and R. Yokomi (California), M. Melzer (Hawaii). C. Roistacher will find a contact for Puerto Rico. For Brazil M. Machado & J. Ayres will work on a per state basis (Brazil), A. Catara and Rosa (Italy), Bar Joseph will be contacted (Israel), L. Batista (Cuba), S.P. van Vuuren & G. Pitersen (South Africa), C. Herron (Africa-Tanzania) and she agreed to try to contact the 14 countries in the organization IITA for more information on Africa, N. Onelge (Turkey), Skoric (Croatia), C. Zhou (China), G. Chambers and P. Broadbent (Australia), K. Bederski (Peru), P. Kyriakopoulou will be contacted (Peru), M. Rocha-Peña (Mexico), M. Williams, N. Duran and L. Matos will make contacts for Uruguay, Chile, Venezuela and Colombia. N. Duran at the end asked the volunteers to follow the formatting instructions and try their best to deliver the information as soon as possible.

7. Wallace & Gumpf Awards – by-laws amendment: Da GraÇa mentioned that the by-laws include rules for the Wallace but not for the Gumpf award. There is a proposal to combine the Wallace & Gumpf awards in one committee for more flexibility. On another matter the Wallace award has a maximum of $1.000. The IOCV should ask Wallace's daughter to remove that restriction since there are available funds for an increase and inflation has rendered the $1.000 too little especially for international meetings. Mark Hilf asked if there is a formula for the amount of the award. Recommendation was made to put a % of the general fund. N. Duran mentioned that this will be a problem in the 1st time that such a formula would apply because there is a lot of money accumulated, the award did not increase for 15 yrs. C. Roistacher added that the Wallace daughter is in contact with the IOCV and will be asked for her opinion before the board of chairs make any changes.

J. Da Graçaa at this point recommended the change of the by-laws for the nominations of the chair to elect. He recommended an e-mail as a reminder and the vote in regular mail. Move was made from C. Roistacher and P. Moreno seconded. M. Hilf asked about the possibility to do the whole process electronically using unique ftp sites so only one person go in each site and the secretary has access to manage the system. P. Moreno said that this couldn't be done because not even the secretary should know the votes/results. Da Graça added that the mailing system works fine and this year actually there was a high number of votes. C. Roistacher said that the recommended change follows the bylaws nicely because the letter response/mail vote is secret but the announcement and reminder is a common public e-mail.

8. Schwarz fund/ Fund raising committee creation:
N. Duran expressed her concern about the reduced number of young memberships and recommended fund raising towards the coverage of conference expenses for young people. J. Ayres agreed that the major problem for participation to IOCV meetings is financial and he will try to get some private funds to help with the fund. M. Cambra recommended inviting private companies (nurseries, exporters etc) to contribute small amounts approx 1.000E. Da Graça said that we need to appoint a committee to organize a mode of action and a protocol for the contact of the private sector. M. Cambra recommended to: 1) to involve young, local people in the organizing committee and 2) approach international young participants with travel money. J. Bove added that we need criteria for which of the young students will get the support.
Mycoplasmology society rules indicate that the lab directors of PhD students propose which student is worthy or not of a travel grand. The committee should process these recommendations and award the travel funds. C. Heron recommended to follow the APS system which handles up to 30 travel awards. APS asks for a grand proposal type of letter from the student who writes why the specific conference is beneficial to his studies and future carrier and the committee invites the best proposals. M. Skaria recommended to negotiate with the hotel hosting the event to offer IOCV a few complementary or reduced price room since the organization is booking many full price rooms. Da Graça appointed as the Schwarz memorial fund committee: J. Ayres, M. Skaria, M. Cambra, A. Catara & J. Bove, indicating that the board agrees with the comment of J. Bove and recognizes the need for swift action. He also reminded that the Schwarz fund for young scientists is supported mainly by donations of the IOCV members.

9. Proceedings
9a. Distribution/sale of copies of 7^{th}-16^{th}
C. Roistacher informed that the old proceedings are in his house and in storage. He also added that libraries around the world are in need of the proceedings and the IOCV members should identify the states/countries that are in need so IOCV can start donating instead of keeping the proceedings in storage. C. Roistacher continued that the set 7th-16th has a price of $100 (US) and that IOCV contacted land grant Universities but without good feedback. J. Bove recommended contacting growers, nurseries and associations as well. P. Moreno recommended that the IOCV should offer as a gift to the organizing country of each conference one or two set of the series. C. Roistacher mentioned that the mailing cost has increased the last couple of years and we need to search for alternatives.

9b. Publication of 17^{th} proceedings
Da Graça opened the conversation about the proceedings of the current conference (17^{th}) commenting that we can not proceed the old way, the manuscript from this conference have started coming already and we need to formulate a plan of action.
Recommendation 1: Editors review the manuscripts and post them on line. When all of them have been reviewed they will be formatted to a common style, recorded to a disk and sent to the participants.
Recommendation 2: Use the Internet or through the Society of Horticulture which publishes in the *Acta Horticulturae* on line and in hard copy. J. Bove commented that IOCV should stay independent. N. Duran added that this is not a good idea since we are not members and it is going to be a lot of work and it is not going to be free. C. Heron mentioned that the grape group does use the Acta and maybe we could combine with them. N. Duran responded that the grape group does not do full papers but extended abstracts and the combination will be rather complicated.
M. Cambra commented that it is going to be pity to stop publishing as IOCV after all these years. He proposed to start an official IOVC journal for citrus pathogens. Published 3-4 times per years will have

approximately 75 papers and 45 posters. If hypothetically only a 25% of the manuscripts makes to the journal the 52 papers can sustain 3-4 issues per year. If the journal opens to other citrus pathologist we can easily make it work. The IVIA librarian performed an analysis for papers published in citrus pathology per year and she discovered approximately 100 of them in journals with impact factor. M. Bar-Joseph commented that the journal idea is applied to a very specialized and small group of people worldwide. The libraries are mostly interested in broad science subjects and big audiences and most likely will not be interested in such journal. The size of the citrus community is not big enough to support such a journal on its own. M. Cambra responded that the other commodities groups i.e. potato publish 2 such specialized journals. M. Cambra continued with some cost estimates for the journal:
1. 4 issues with 62 pgs color and mailing will cost E 23.000/yr. J. Bove mentioned that personnel is required for such project. M. Cambra responded that there are companies that handle everything.
2. One annual volume like "Phytoma" in France and Spain with 500 copies and 100 places in the world will cost E 18.000/yr. This scenario will cost IOCV approximately E 9.000 while other institutions can contribute i.e. IVIA can pay up to E 3.000. IOCV will hire a company to handle the storage, maintenance of the files, mailing, and advertising. The volume design is done already. The current cost of the proceedings is $ 20.000 and IOCV pays the mailing. There are details that we can discuss later such as countries with low cost publishing companies i.e. India.
A. Catara commented that we cannot decide right now. We need to invite 3-5 publishers to make offers and then the board can make a decision. N. Duran responded that at least we need to decide which plan we are going to follow, Proceedings, Journal with a few volumes per yrs or an annual volume. P. Moreno made two comments: a) if a company makes profit form the journal how are we going to be able to post the volume online for public access; and b) the publication of one volume will be problematic because it will have to wait for every paper to come in. N. Duran responded that a journal with small volumes would solve this problem since the papers will be published as they arrive. M. Cambra added that the cost difference between one annual volume and four volumes per year is E 5.000 more.

C. Roistacher informed that the proceedings of the 16th conference cost $ 20.000 with $40 per volume plus page charges. In addition the shipping is now by law air only which cost many times up to $20 per copy. So the final cost for the authors/members becomes $40+20+page charges. In addition to that IOCV bears storage cost for any unsold volumes. The stored volumes increase each year since 200 copies cost the same as 500 copies and the IOCV usually orders the higher number.

P. Moreno summarized three proposals for the proceedings:
1. Maintain the proceedings maybe with another publisher.
2. Hire a company to produce 1-4 volumes, journal type.
3. Hire a professional to format and post everything on line.

J. Da Graça asked for additional discussion to the basic question for a hard copy or not. An indicative vote/hand count for electronic vs. hard format was taken with
Hard copy votes: 28
Only Electronic votes: 5

M. Hilf asked if we decide to do the journal/volumes are we going to have submission deadlines for the first year after the end of the conference or are we going to extent the deadline in to the three-year period between the conferences? The panel and body responded that a three-year submission deadline would not be practical.
J. Bove commented that if a paper is in electronic format IOCV could produce a cd or DVD and not a paper hard copy. M. Hilf & C. Roistacher responded that the cd production is easy from online formatting the difference will be to produce a cd instead of a book. M. Hilf also suggested an intermediate route where in addition to a cd the printer/publisher could produce a small number of books. C. Roistacher commented that if follow that route the page charges will be reduced.
At this point four proposals were summarized for further discussion:
1. Hard copy and on line
2. Online and cd
3. Online only
4. Cd and a small number of hard copies

M. Barba informed the group about the scientific journal "Petria" published by the Italian Institute that she works and many times hosts proceedings. They produce three volumes per year in good quality. They can publish both black and white and color pictures, there is a small staff to organize the publication, and they find small printers to do the printing but the journal is also is posted on line in their website. Three volumes per year with 250 copies cost approximately E 6.000 if more copies are required can be produced with additional cost. The institute put its own first page and the proceedings put their first page just after that inside after that it follows the rules of publishing, and the name of the person that worked in the project. The journal doest just the publication not the reviews and therefore IOCV would be responsible for the manuscript reviews. The panel asked if IOCV can post the final publication online in the IOCV web page as well. M. Barba responded that to the best of her knowledge that should not be a problem and continued saying that the publishing cost has to be covered by IOCV, while the storage will be handled by the institute, she also added the mailing/shipping sounds to high and she feels that the Italian institute most likely can do it cheaper. Format will have to follow the institute formatting.

At this point a vote was taken for the proposals summarized earlier:
1. Hard copy and on line, votes 23
2. Online and cd, votes 8
3. Online only, votes 2
4. Cd and a small number of hard copies, was not discussed further and was not put to vote

10. IOCV Fellows: Da Graça clarified that fellows of IOCV are people that dedicated their life to the Organization, they are excused from membership fees and are not elected to office. This year there were three nominations.
1. J. Bove read his letter of recommendation with N. Duran support for Victoria Rossetti
2. M. Skaria read his letter of recommendation for Peter Timmer.
3. C. Roistacher read his letter of recommendation for Luis Navarro
All three nominations were unanimously accepted

11. Conference venue 2010: J. DaGraca invited the representatives of the countries that made offers for the 2010 conference to take the stand.

i. A. Catara-Italy. The idea for the Italian offer comes from the 1966 conference in Sicily. An IOCV conference in Italy and Sicily will give access in many historical places that combine old and modern civilizations. In Palermo we will be able to see old citrus while in Agrigento we will see new varieties. The proposed program will include a 4 day conference in Catania and bus tours to Calabria and Barry with a total of 10days. In Catania we will see new facilities and young research groups. The University and local government is in support the IOCV conference and Catara believes that he will be able to find additional support for young people to travel to Italy.

ii. K. Bederski-Peru. In terms of citrus diseases in Peru we will basically see only CTV and cross-protection. It will be very useful for Peru because it will provide a chance for the growers to be acquainted about all the other important citrus diseases. Peru also is the only tropical country that grows citrus in non-tropical conditions due to micro-climate and cool air currents. The proposed program included a pre-conference with tourism in the Incas Andes at 3.300 m altitude, a stay in Cusco, a visit in Machupichu, Sacred valley salt mine, Puno, and lake Titikaka. The conference will be hosted in the National University of Agriculture La Molina and this will give an excellent opportunity to the students to see an international organization in action. Hotels of three, four and five stars are available and easily accessible from the University. There is no recommendation for the post-conference but we could travel to Brazil for more citrus diseases and orchards.

iii. M. Machado-Brazil: The Sao Paulo citrus industry is very big and faces even bigger disease challenges such as HLB, Leprosis, Sudden Death and CVC therefore the international help and ideas are more than welcome. The citrus nursery program in Brazil is also very special and there is a new dynamic group of scientist involved in disease research. In addition Sao Paulo has very good infrastructure in terms of roads, hotels etc. The Brazilian government, the Secretary of Agriculture and the Fundecitrus are in support of the congress. The best time of the year for disease symptoms will be August, which is also the low tourist period. The conference schedule will include visits to Riberao Preto, Campinas, and Sao Jose.

J. Ayres agreed about the support of the Brazilian government and the private sector to the conference. He also mentioned that HLB research interest is very high in Brazil since people believe that this disease will bring to its end the two million trees industry of Sao Paulo and the IOCV members must see all the activities. In addition Sudden Death, Canker (50yrs anniversary in Brazil-2007), CVC (20yrs anniversary in Brazil-2007), Leprosis, Black spot, CTV stem pitting, Phytophthora, and Blight are also present in Brazil. Sao Paulo city is an ideal location with good infrastructure and just three hours away from the area of the Sao Paulo state that includes 80% of Brazilian citrus. We will see in place programs of citrus nurseries (25 million trees 2007-100% of nursery under screen), field practices (insecticide applications, HLB inspections, tree removal). Tourist visits will include the city of Rio, the falls, and the Christ statue at the city high point.

N. Duran asked if a combination of the Brazilian and Peruvian proposal is possible as K. Bederski recommended with conference in Peru and post-conference in Brazil. Discussion followed about potential support problems by the Brazilian government or private sector, and too long duration of the event.
At this point a vote for the three offers took place with:
Italy votes: 9
Peru votes: 8
Brazil votes: 16

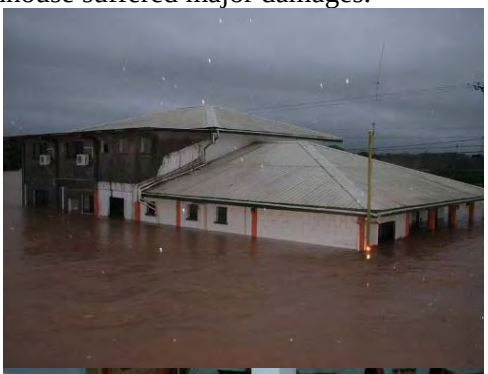
12. Other business: Other business none
13. Adjourned

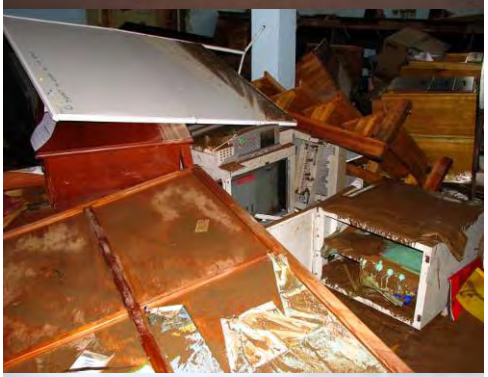
NEWS

Disaster in Belize

Veronica Manzanero Majil
Dear All,
Hello from Belize.....
On June 2nd, we witnessed the collapse of the property Citrus Growers Association and more significantly the collapse of the infrastructure of the Belize Citrus Certification Program. All this was caused by a flash flood that swept through the area between 2am to 4am. About 700 families lost everything and 4 persons died from around the area. The water did not reach to about 6 to 8 houses, thankfully mine is included in that.

While I thank God that we are still alive, the CGA suffered a 100% destruction to everything. All the tunnel screenhouses that housed the multiplication blocks are completely gone and the tree other screenhouse suffered major damages.





All the lab equipment are gone, everything. Most files and records are gone including all my precious books. On that note I would like to request if you or any of the other colleagues have extra copies of papers and book related to citrus or any lab equipment to test for citrus diseases (ELISA or PCR), please ask them to kindly send to the below address. Some of the books that I lost and would like to replace are the following:
Handbook for GTDs - CN
Citrus Varieties of the World
Citrus Health Management - Timmer et. al
Citrus Tristeza Virus - RFL
Molecular Cloning (Vol 1,2,3)
Short Protocols in molecular biology

Not sure when I will be able to write again as we also have limited internet access at the moment.
Sincerely,
Veronica.
You can contact veronica at:
vema600@yahoo.com and
Veronica Manzanero Majil
Citrus Growers Association
Mile 9
Stann Creek Valley Road
Belize
Central America.

Huanglongbing and its Vector in Cuban Citriculture

Raixa Llauger, Maritza Luis, Cyrelys Collazo, Caridad González, Inés Peña, Daylé López, Lochy Batista, Jorge Cueto, Diva Do Carmo Teixeira, Elliot W. Kitajima and Joseph M. Bové.
In Cuba citrus plantations occupy an area of more than 40,000 hectares. In recent years production has been affected by natural phenomena such as hurricanes and several diseases. The Huanglongbing (HLB) disease, detected in residential areas of the city of Havana, has now been added to all these damages. In the surveys carried out, plants with characteristic symptoms of the disease have been found in all citrus areas of the country. The presence of Candidatus Liberibacter asiaticus has been confirmed by PCR in plant tissue and Diaphorina citri Kuwayama. The remaining species of Liberibacter have not been found. The presence of the pathogen was also recently confirmed by electron microscopy.

D. citri (Hemiptera: Psyllidae), was first observed in Cuba in February 1999 in *Murraya paniculata* (L) Jacq., in urban areas of the city of Havana. It disseminated quickly causing damage as a pest and is presently distributed in all citrus-producing areas. The natural enemies found were 6 predators: *Cycloneda sanguinea* (L) *Chilocorus cacti* (L), *Exochomus cubensis* Dimn and *Scymnus distinctus* Casey: *Chrysopa sp.* and *Ocyptamus sp.*, a parasitoid: *Tamarixia radiata* Waterston, and the entomopathogenic fungus: *Hirsutella citriformis* Speare. *Triphasia trifolia* (Burm.) (Dicotiledonea: Rutaceae), was informed as a new host for *D. citri* in Cuba. All the developmental stages of the insect were observed in association with a group of natural enemies: amongst them: *Cycloneda sanguinea* L., syrphids, chrysopids and *Tamarixia radiata* Waterston.

At present, work is being carried out to define the incidence of HLB and a management program according with the situation of the disease in Cuba.

An Update on the Spread of Witches' Broom Disease of Limes in Iran

Dr. Mohsen Mardi
Dear IOCV members,
Greetings from the Iranian Witches Broom Disease of Lime Network (IWBDLN), Tehran, Iran. With this note I would like to inform you about the current situation of witches' broom disease of lime in Iran.

Witches' Broom in Iran

Lime is one of the most economically important horticultural products in the south part of Iran. The first appearance of Withes' Broom Disease of Lime (WBDL), in Iran was in Sistan & Balouchestan province in 1997, and a year later in 1998, was observed in Hormozgan province that produces about 50% of the national product. During the past years the number of infected trees has been greatly increased. The number of the identified infected trees in 1998 was just 51 but unfortunately due to lack of sufficient disease control and management, in 2008 the number of infected trees increased to 500,000.

Due to the devastating increase of the disease the last 10 years and the uncontrollable propagation of

WBDL infected trees, the IWBDLN was established under the supervision of the Iranian Ministry of Jihad-e-Agriculture. A comprehensive management program was prepared and many international researchers have been invited to present their ideas and projects for the control of the disease and the development of tolerant lime cultivars. It is assured that the accepted projects will receive high appreciation and support by the IWBDLN.
If you wish to have any additional information please contact us at:
Dr. Mohsen Mardi
Manager, Iranian Witches' Broom Disease of Lime Network (IWBDLN)
Agricultural Biotechnology Research Institute of Iran
Mahdasht Road, Karaj, Iran
P. O. Box:31535-1897
Email: iwbdln@abrii.ac.ir
Tel & Fax: +98-261-2700845

More information for WBDL visit:
http://ecoport.org/ep?SearchType=slideshowView&slideshowId=206

New ECOPORT Slide Show

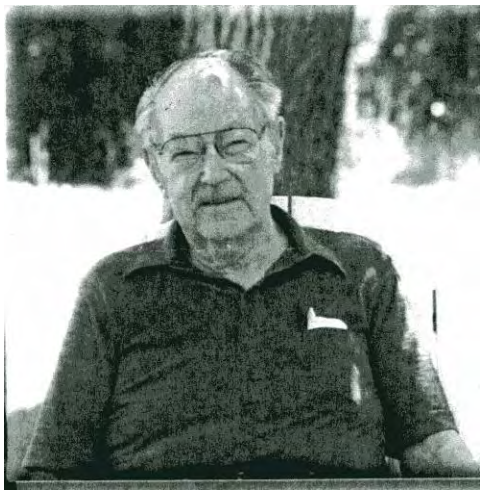
Chet Roistacher
The history of rootstocks is closely tied to citrus graft-transmissible diseases. In my talks and lectures I find it difficult to get into the subject of various citrus diseases without reviewing rootstocks. This slide show summarizes the various citrus rootstocks and their properties.

Rootstocks for citrus:
http://ecoport.org/ep?SearchType=slideshowView&slideshowId=207

Obituaries

Lloyd C. Cochran
April 5, 1906-February 4, 2008

Dr. Lloyd C. Cochran died at the age of 101. He was born April 5, 1906, at Frankfort, Indiana son of Bertha E. and Morris E. Cochran, both school teachers and later farmers. Lloyd attended a country one-room grade school and graduated from Rossville, Indiana High School. He received a BSA degree from Purdue University and M.S. and Ph.D. degrees in plant pathology from Michigan State University. In 1933 he married Maud V. Tague and in 1936 they moved to Riverside, California, where he joined the Citrus Experiment Station of the University of California. For the next 21 years he did research on virus diseases of citrus and deciduous fruit and nut trees. In 1957 they moved to Orlando, Florida where Lloyd became chief of fruit and tree nut crops research for the US Department of Agriculture. Lloyd retired in 1969 and they moved to Corvallis, Oregon where he joined the botany department of Oregon State University to work on rose diseases until his retirement 1973.



Lloyd C. Cochran

Lloyd Cochran was a long time member of IOCV, attended many of the early conferences and contributed to the proceedings. C. Roistacher had been in correspondence with him over these many years and in many of his letters, he expressed concern for the HLB/greening disease problem in Florida. He was fully aware, at age 100, of the impact this disease could have on the citrus industry in Florida and expressed concern for its appearance in Texas and California. His mind was clear and sharp to the end and this was readily seen in his letters and clear handwriting. For the old timers in IOCV who knew him he will be remembered and missed. Dr. L.C. Cochran is survived by his daughter Lettie Mortimer and son John Cochran, his four grandchildren, and five great-grandchildren.

Pauline Hatch Weathers
January 20, 1925-January 1, 2008

Died peacefully at her Riverside home on January 1, 2008, after extended illness. Pauline was born in Salt Lake City, Utah to Clarisse and George, Quincy Hatch. She grew up in Utah and moved to California in 1953.Pauline was married to Dr. Lewis G. Weathers for sixty-two years. Pauline accompanied L. Weathers in many IOCV conferences and her lovely company will be missed. The IOCV wishes to express its deepest condolences to Lewis and his family. Pauline is survived by her husband, her two daughters and sons, her six grandchildren and three great-grandchildren.

Pauline Hatch Weathers