UNITAS MALACOLOGICA



Newsletter

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Dear members,

In the period between the World Congresses of Malacology, the business of Unitas Malacologica is to reflect on past achievements and maintain momentum in the global community of malacologists. We are looking forward to our next gathering in 2016 in Penang, Malaysia.

In January 2014 the UM Council held a meeting to confirm all the details of the next Congress venue and we welcomed our President. Aileen Tan Shau-Hwai, to Brussels where we convened for a short visit. She presented her strategy for sponsorship, venue. and academic participation and we are all confident this will be an outstanding meeting. There is still time to propose thematic symposia within the scientific programme of the congress and I would urge you to please make your suggestions known to Aileen or to anyone on Council.

In this issue of the Newsletter you will find a brief message from the President on the next WCM, and reports of the previous meeting in the Azores hosted by past President António de Frias Martins.

We have already solicited applications for, and awarded

research awards for 2014. The winners are announced in the Secretary's column. Two past winners present their research findings later in this issue.

In this spirit of maintaining momentum, Council are currently considering alternative ways to maintain communication with the UM membership. It has been several years since we suspended the paper production of the Newsletter, and it may be that it is time to further modernise or communication. I would love to hear your thoughts and suggestions. Indeed, it has now been exactly ten years since I took over production of the Newsletter, and it is now time for some new ideas and a fresh approach to UM communications. Volunteers?

JDS

Next newsletter - Spring 2015

Our aim is to further the study of Mollusca by individuals, societies and institutions world-wide

Affiliated Organisations

American Malacological Society | Asociación Argentina de Malacología | Conchology, Inc. | Deutsche Malakozoologische Gesellschaft | Hungarian Malacological Society | Instituto Português de Malacologia | Koninklijke Belgische Vereniging voor Conchyliologie | Latvian Malacological Society | Malacological Society of Australasia Ltd | The Malacological Society of Japan | The Malacological Society of London | Malacological Society of the Philippines | Nederlandse Malacologische Vereniging | Sociedade Brasileira de Malacologia | Sociedad Española de Malacología | Sociedad Malacológica de Chile | Società Italiana di Malacologia | Société belge de Malacologie | Society for the Study of Molluscan Diversity, Japan

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World Congress of Malacology <u>Penang, Malaysia - June 2016</u>

Dear friends,

The 2013 World Congress of Malacology in the Azores achieved such great success that set a very high benchmark for others to match. Therefore, I take this opportunity to congratulate Antonio de Frias Martins, past UM President and Congress Organiser, and his collaborators, for the splendid organization of the congress. My appreciation also goes to all the earlier congress organizers who had done well for UM. Now, I am facing the challenge of organizing the next World Congress of Malacology in 2016, which will be challenging since such a very high standard was set by past congress organisers.

The first meeting of the current UM Council took place in Brussels on January 18, 2014, where all council members discussed the success of the World Congress in Azores, and the plans for the coming WCM 2016 to be held in Penang, Malaysia. The planning and preparation of the congress has progressed steadily and we are now in the midst of constructing the Congress website. The first announcement website will be activated very soon. The main information in the announcement will be the final date and venue, and some initial planned symposia.

I have great support from the Council Members as well as friends sharing the same passion for molluscs. Several symposia themes had already been proposed:

- Ecology of Marine Molluscs
- Molluscan Aquaculture in a Changing Climate
- Molluscan Biodiversity and Biogeography in the Indo-West Pacific
- Integrating molecules, morphology, biology and biogeography in "Opisthobranch" research

An exciting program of molluscan science is planned for the Penang World Congress of Malacology 2016 (WCM2016). I hope there will be high diversity in the scope of papers covering all aspects of molluscs. I would like



to take this opportunity to extend **an invitation for all to propose symposia themes** for which you would be prepared to act as symposium organiser. For those who are interested, please communicate with me or any of our council members, so we can put the program together for the coming WCM2016.

WCM2016 will be hosted in Penang, Malaysia, the second UM congress to be held in Asia after Thailand in year 2010. The Congress is planned to be held in June 2016, which coincides with the fruit season in Malaysia. This will enable all international participants to have the opportunity to taste the local tropical fruits especially the King of Fruits (durians). Penang has been long regarded as the food capital for Malaysia, is known as the 'Pearl of the Orient', and has been listed in UNESCO World Heritage Site Record since 2008 for its heritage buildings, art and culture. I am confident that Penang will be a place full of excitement for all, and I would like to invite all of you to come and see for yourself.

I look forward to your participation in Penang in 2016. Let's work together to make WCM2016 an exciting and fruitful Congress.

Aileen Tan Shau-Hwai President aileen@usm.my

Unitas Malacologica Newsletter

Secretary's Column

Dear members,

In 2014 we return to announce the next UM Student Awards. The deadline for submissions was 30 April 2014 and the Council selected three awardees. Congratulations!

Maike Hernandez Quinta, Havana University, Cuba

Awarded $\in 1000$ for the project "Mating behaviour in Jeanneretia s.s. (Helicoidea: Cepolidae), endemic of the western region of Cuba"

Silvia Lourenço, University of Lisbon, Portugal

Awarded €750 for the project "Stable isotope signatures in age structures of cephalopods as indicators of ontogenic habitat shifts"

Lauren Sumner-Rooney, Queen's University Belfast, N. Ireland

Awarded \notin 750 for the project "*What does the* Schwabe organ do? An electrophysiological study of a novel sensory organ." In the following pages you could read reports of Carla Lourenço from University of Algarve, and Igor Christo Miyahira of Universidade do Estado do Rio de Janeiro, two previous winners of the student research awards.

As you know, in 2013 all UNITAS expenditure was to focussed on supporting the participation of the students in the congress of Azores. The participation of the students was very high, in the figure below you can see how many grants were given to each country.

So, WMC13 is history and now we are looking toward WMC16 to be held in Penang, a beautiful Island located in the Malacca Strait, Malaysia.

The last council meeting was celebrated in January 2014 in Brussels. Our President showed and explained to us an extraordinary pre-program for the next congress in Malaysia. Further information will be published in next Newsletters or in the website.

Jesus Troncoso

UM Secretary



Treasurer's Column

Dear members,

Unitas Malacologica, through its Endowment Fund, has contributed to the World Congress in Ponta Delgada, Azores, Portugal, 2013, with not less than 33,700.00 euros, enabling 50 PhD students and young researchers to participate. An additional amount of 900.00 euros was spent to award the best oral and poster communications by students.

It may sound unbelievable but António de Frias Martins, UM President and Congress Organiser, managed to reimburse Unitas with that same amount!! This means that Tony returns a benefit to Unitas even higher than the total of two 'financially lucky' congresses in the past. This brings the financial situation of Unitas Malacologica to a very healthy level with great expectations for the next congress in Malaysia.

Tony has to be warmly congratulated and cordially thanked for his titanic performance!!

I like to share with you another issue: lifetime membership of Unitas. This issue has been raised several times and no formal decision has ever been taken. Perhaps there is now a momentum. Indeed Liew Thor Seng, one of our members who joined UM in 2004, asked me if he could pay his membership dues for tens of years in advance. In doing so he would like to express his gratitude to Unitas since he had received support from Unitas during his PhD studies in the Netherlands.

Liew wrote me that life expectancy in Malaysia is around 75 years. Being 30 years old he decided to pay annual dues for 45 years which represents 720.00 euros. I think that none of my successors will ever remember Liew to renew UM membership in the late '50's. Yet Liew's gesture could be a modus for calculating the fee for a life time membership to Unitas...

In any case thank you very much dear Liew for your generosity.

Maybe this is a good moment now to ask all other members to renew their membership in paying at least 48.00 euros for a three years period. 2014 has gone far enough and many members face arrears to pay. You may like to use the form 'payment of membership' which is available at the UM website

http://www.unitasmalacologica.org/membership.html.

Donations to the Endowment Fund are key to set up activities to the benefit of PhD students and young researchers, in particular for the congress travel grants, the 1,000 euros research awards and the congress prizes.

With great pleasure I can mention many individual donations to the Endowment Fund received in the period September 2012 – August 2014:

- an additional donation by Liew Thor Seng of 280.00 euros,

- a donation by Christiane Todt of 202.00 euros,

- a donation by the Sociedad Española de Malacología of 504.00 euros (thank you very much dear Jesús!),

- a subsequent donation by the Malacological Society of Japan of 342.00 euros (thank you very much dear Hiroshi!),

- donations by Gizelle Batomalaque, Ian Kendrich Fontanilla, Helena Fortunato, António de Frias Martins, Jiri Fryda, Seiji Hayashi, Tomasz Maltz, Timea Neusser, Yara Tibiriçá, Maxim Vinarski, the Malacological Society of the Philippines,

- and round-ups by Lenita de Freitas Tallarico, Zofia Ksiazkiewicz, Introini Gisele Orlandi, Somsak Panha, Hiroshi Saito, Alexandra Staikou, Chirasak Sutcharit, and Piyoros Tongkerd.

Thank you all very much!!

Best wishes.

Jackie Van Goethem

UM Treasurer

Unitas Malacologica Newsletter

Council Meeting

MINUTES OF COUNCIL MEETING

Royal Belgian Institute of Natural Sciences (RBINS), Brussels, Belgium

10:00-18:30, Saturday, 18th January, 2014.

Present: Aileen Tan Shau-Hwai (President), Antonio Frias Martins (Past President), Thierry Backeljau (Retired President), Jackie Van Goethem (Treasurer), Julia Sigwart (Council Member), Hiroshi Saito (Council Member), Mark Davies, by SKYPE (Council Member) and Jesús Souza Troncoso (Secretary).

1. Apologies for absence: Apologies were received from Jeanne Serb (Council Member).

2. Minutes of previous meeting.

The previous meeting was celebrating in Azores. The minutes were accepted.

3. President's report (explanation about next venue: congress logistics, program, dates, finances, sponsors, committees, etc.)

3.1 Past President's report (Prof. Frias Martins)

The Past President display a complete printed report of the activities of the WMC13, in summary there was a 432 participants from 55 nationalities, he present a financial summary too, and like a curiosity he said the equilibrium between woman/man was fifty-fifty. The complete report will be published in next Newsletter (2014).

3.2 Retired President report (Prof. Backeljau)

The Retired President talks about his past experience organizing the WMC '07. His experience was and will be very useful for the President.

3.3 President's report

Our current President, Aileen provide us with a printed summary with Preliminary information and a tentative Programme for the next WMC16. She indicates that all is actually under control and her exposition convinces us that the Congress will be a success. The tentative date could be July 2016, she and all of us will contact with other colleagues to organize symposiums and all members of the Council will try to visit Penang (Malaysia) in July 2015 to see in the field the venue in view to detect some difficulties and talk with the local organizers.

4. Treasurer's report

Our Treasurer gave us very good news, the financial outcome of the Azores Congress presented a benefit for Unitas in the amount of 33,700.00 euros. Tony was warmly congratulated for his Titanic performance. The treasurer told us that UNITAS is in good financial health and presented the budget report (see annexes).

Jackie emphasised that Thierry did a great job in preparing the logistics for our Council meeting facilitating the arrival, the venue and welcoming of the attendants. Thank you very much Thierry from all of us.

5. Secretary's report

The secretary explained his work during the last 3 years. His principal task was organized calls for two student awards and one travel grants. The result of student awards was published in previous newsletters. For the travel grants to participate in WMC13 we received 64 applications from 21 countries, UNITAS allocated the sum of 35,000 for this matter, the distribution of the grants by countries will be publishes in next newsletter (early 2014). We talk about the new call for Student Award which will have it deadline 30 April 2014.

6. Appointment of new Officers for 2016

In 2016, a new President, a new Secretary, a new Treasurer and two Councillors must be elected. Still we have time but we need to take this matter in consideration. About the new President, Julia will contact with David Lindberg to know if he and Terry Gosliner are able to organize the next WMC in San Francisco, other candidates was suggested during the General Assembly in WMC13 in Azores, these were: Munich offered by Gerhard Haszprunar, Tokyo proposed by Hiroshi Saito. Julia and Jesus talked about Brazil; Jesus suggested Rio de Janeiro because the President of SBMa, Sonia Santos work in this city and he, together with his group, have extensive experience organizing malacological congresses. Jesus will contact with the President of Brazilian Malacological Society in terms to know if he is able to organize the WMC for 2019 or 2022. Other countries were also named as potential candidates to be the next venue (Poland, Turkey and Greece).

In 2016, besides the President the positions

falling vacant will be: 1.- Treasurer, Jackie will be decide in 2016, if he chooses to step down, the council considers Thierry an excellent candidate because he knows perfectly the budgets of UNITAS; 2.- Secretary, Jesus talk about the possibility to contact with Elena Fortunato from Hokkaido University for this position or to be a council member, because she expressed interest in participating through her presented a candidature for the last elections; 3.- Two Council Members, about this matter the council talk about the necessity that at least one of them have capabilities to help Julia or to manage the website and introduce UNITAS in the social networks too.

7. Any other business There was no other business.

8. Request and questions There were no more questions.

The meeting was closed at 18:30h.

Conference Announcement

Unitas is pleased to support the 5th INTERNATIONAL WORKSHOP ON OPISTHOBRANCHS to be held in Porto, Portugal, 13–15 July 2015

The 5th I.W.O. will be held in the Abel Salazar Institute of Biomedical Sciences of the University of Porto. All opisthobranch researchers are warmly invited to participate in the 5th IWO and contribute with oral or poster presentations. We expect a wide participation and lively discussions on all subjects related with opisthobranchs.

Registration will be available soon via the website: http//www.5iwo.org/ Or by contacting the chair of the organising committee: Alexandre Lobo da Cunha, alcunha@icbas.up.pt

Jesus Troncoso

UM Secretary

Student Research Report

FIRST RECORD OF THE MARINE MUSSEL PERNA PERNA ALONG THE EUROPEAN COAST: LONG OVERLOOKED OR A RECENT RANGE EXPANSION?

Carla R. Lourenço

The recent report of *Perna perna* on southern Atlantic Iberian shores represents a remarkable shift of the previous northern limit of distribution along the Moroccan coastline (Fig. 1). This project was a logical extension of previous studies and it aimed to (1) geographically extend previous surveys into European Mediterranean shores to fully understand the latitudinal and longitudinal limits of P. perna expansion and its abundance along the shore (2) genetically characterize Mediterranean P. perna populations. To achieve these goals, two different data sets have been assembled: (1) field survey along Mediterranean Iberian shores and abundance quantification and (2) genetic characterization of individuals from the recently known distributional range.

Part 1 - Distributional range and abundance quantification

Material and methods

The distribution and range expansion of Perna perna were investigated through extensive field surveys during low spring tides (April 2013). Twenty five exposed locations (natural rocky intertidal shores or man- made hard substrate structures) were surveyed along the Mediterranean Iberian coast. At each location, two observers assessed presence or absence of P. perna by performing approximately 60 min search across all intertidal microhabitats. The presence of the dominant marine mussel Mytilus galloprovincialis was considered an indicator of suitable environmental conditions for P. perna given the previous reported coexistence of both species in other regions. A subsample of sites was chosen for further analyses on population structure (Part 1) and genetic diversity (Part 2). Furthermore, these samples were compared with recently reported southwest Iberian edge and

genetic characterization were analyzed. Atlantic Iberia: TV - Ta-vira, VRSA – Vila Real de Santo António, AT – Atlanterra; North Africa: RB – Rabat, CB – Casablanca; SB – Sidi Bouzid; Mediterranean Iberia: TG – Torreguadiaro, LA – La Araña, AM – Almuñecar, BM – Balerma, CG – Cabo de Gata. Black dashed line illustrates the survey conducted as a result of the UNITAS award while the orange continuous line shows the *P. perna* range shift recorded during the survey.

390 km

central well established Moroccan populations.

The abundance of P. perna for each location was determined using random photo-quadrats. A total of 10 quadrats (30 x 30 cm) along a horizontal transect were photographed with a digital camera across Mediterranean shores. Along Atlantic Iberian and North African shores, where mussel beds are less compressed, nine quadrats per transect were photographed perpendicular to the coast, totalizing five transects. Abundance was quantified based on the percentage cover of primary space occupied by P. perna, using IMAGEJ. Only monolayered mussels in beds attached directly to substratum were used in this study. To compare abundance variations between Atlantic Iberia, Mediterranean Iberia and North Africa an analysis of variance (one-way ANOVA) was performed under the null hypothesis of no differentiation between regions. Region (three levels) was a fixed factor in the analyses, and Location (three replicates) was the dependent value. Data were square root-transformed and all tests and respective significance values were performed with STATISTICA (StatSoft).

of *P. perna* individuals. No additional sites were included north of Cullera.

A significant difference was found when comparing *P. perna* abundance in Atlantic Iberia, North Africa and Mediterranean Iberia (Region, p<0.05; Fig. 2). Although the abundance was significantly higher in North Africa than in Atlantic Iberia (p<0.05), no significant differences were found between Mediterranean sites and Atlantic Iberian or North African shores (p=0.26 and p=0.20).

A major goal of this study was to compare stable populations of *P. perna* in Morocco and edge populations in Atlantic Iberia with mussels colonizing Mediterranean Iberian shores. My results revealed higher abundance of *P. perna* over Moroccan areas and remarkably low abundance along Atlantic Iberian shores. In the Mediterranean, the abundance of *P. perna* is decreasing towards the east distributional limit. This is in accordance with the theoretical assumption that organisms living at the edge of their distribution, and consequently subjected to less suitable ecological conditions, show low density and habitat occupancy. Furthermore,

Results

Surveys along the south Spanish coast from Torreguadiaro to Cullera revealed the limits of the expanded range of P. perna along Mediterranean Iberian shores (Fig. 1). The Mediterranean mussel M. galloprovincialis and the brown mussel P. perna were reported from Torreguadiaro to Cabo de Gata, although absent from Roquetas de Mar and Aguadulce. After an intertidal distributional mussel gap (between Cabo de Gata and Cabo de la Nau) M. galloprovincialis reappeared in Dénia and Cullera, with no detection

Figure 2 – Abundance (+SD) quantified as percentage of covered area occupied by P. perna along Atlantic Iberian (blue), Mediterranean Iberian (green) and North African (orange) shores. Codes correspond to sampling locations: VL- Vilamoura, VRSA – Vila Real de Santo António, AT – Atlanterra, LA – La Araña, AM – Almuñecar, BM – Balerma, RB – Rabat, CB – Casablanca, SB – Sidi Bouzid as in Figure 1.

at LA, the abundance of the brown mussel is extraordinarily high, presumably due to favorable ecological conditions caused by the upwelling occurring in this region.

Part 2 – genetic characterization

Material and methods

Samples of P. perna (n=166) were collected along the intertidal zone from three distinct Mediterranean locations, two Atlantic Iberian and two Moroccan sites. To assess population genetic structure and diversity, mantle tissue of each individual was used to perform a genomic DNA extraction using an adapted standard Proteinase K protocol. A total of nine microsatellite loci were amplified using PCR amplification conditions already tested. Allele sizes were scored using STRAND software, binned with the R package MsatAllele, and manually reviewed for ambiguities. For each location, from linkage and Hardy-Weinberg equilibrium were tested for significance with 10,000 permutations using GENETIX 4.05. Allelic richness (Â) was estimated for each location and standardized to the smallest sample size (n = 13), using GENETIX and the StandArich package on R 2.10.1 software. F_{ST} and p-values were estimated between pairs of locations using GENETIX 4.05.

Results

Although datasets show the two differences regarding expected and observed heterozygosities, both suggest a lack of genetic structure for all locations from the three different regions (Atlantic Iberia, Atlantic Morocco and Mediterranean Iberia). In this sense, instead of regional genetic structure, my results indicate a unique panmitic population extending through the southwest Atlantic Iberian and Moroccan shores into the Mediterranean. This pattern has already been reported in Iberian Atlantic populations of Mytilus galloprovincialis. Largescale lack of genetic structuring for species with long planktonic phases (P. perna larvae spend 2-3 weeks in the water column) is indicative of a high dispersal potential. Long larval dispersal can be further promoted by the intricate pattern of hydrodynamic features affecting the region. The study area is influenced by several currents with contrasting directions and intensities, which ultimately promote larval dispersal and, possibly are responsible for the lack of genetic structure. The southwest coast of the Iberian Peninsula, as well as the northern Moroccan coastline, is mainly governed by the eastward flowing Azores Current. The eastward branch of this current enters the Gulf of Cadiz and flows south because of eddies and gyres which are very frequent southwest of Cape São Vicente on the south coast of Portugal. Additionally, the Canary Current transports the North Atlantic Central Water (NACW) southwards, therefore affecting the west coast of Morocco, and in the Western Mediterranean, two intense gyres occur in this study area (West Alboran Gyre and East Alboran Gyre), potentially promoting larval dispersal.

Conclusions

The distributional limits of Perna perna along the Atlantic and Mediterranean European shores were intensely investigated. During part of my MSc thesis the western distributional limit of P. perna was found in Sagres (south Portugal) and the UM Award survey allowed me to detect the eastern range limit in Cabo de Gato (south Spain). In the Mediterranean, P. perna abundance together with mussel size was incredibly high in the west and decreased towards the east distributional limit. This might be easily explained by the favorable ecological conditions caused by the upwelling occurring in the west Mediterranean study area. Although cold upwelling water could limit P. perna, this effect is counter acted by the high amount of food that may help in sustaining the species throughout most of the year. Moreover, the West and East Alboran Gyres, the Canary Current, together with eddies and gyres which are very frequent on the south coast of Portugal, promote larval dispersal thus allowing P. perna larvae to easily reach locations that are geographically far apart. In addition, the species also presents a high dispersal potential which, together with the hydrodynamic features of the study region, may justify the lack of genetic structure throughout three distinct biogeographic regions.

FOLLOWING JOHANN BAPTIST RITTER VON SPIX STEPS IN SÃO FRANCISCO RIVER – A QUEST FOR SPECIES OF DIPLODON (UNIONOIDA: HYRIIDAE)

Igor Christo Miyahira

Johann Baptist Ritter von Spix, zoologist, and Carl Friedrich Philipp von Martius, botanist, traveled three years in Brazil from 1817 to 1820. They collected a huge amount of specimens and made important appointments about Brazilian fauna and flora. Spix studied not only molluscs but also fishes, reptiles, birds and several other groups of Brazilian fauna. Spix passed away in 1826 before finishing his work on molluscs; his drawings and brief descriptions was later enlarged and published by Johann Andreas Wagner in 1827 with new descriptions (Cowie et al. 2004). Considering freshwater bivalves, in this book it were described four species of Diplodon Spix in Wagner, 1827: D. furcatum Spix in Wagner, 1827, D. ellipticus Spix in Wagner, 1827, D. rhombeus Spix in Wagner, 1827 and D. rotundus Spix in Wagner, 1827. The wonderful collection made by these two naturalists was housed at Zoologische Staatssammlung München (ZSM) in Munich (Bavaria, Germany). This museum suffered during the World War II and

some type specimens were considered lost (Cowie et al. 2004). The type specimen of *D. ellipticus* was one of these lost specimens, but it was recently found and redescribed by Miyahira et al. (2013).

My doctoral thesis aims to evaluate Diplodon species occurring in some hydrographic basins of Brazil. The major part of museum collections, regarding the genus Diplodon, is composed mostly by shells. It is rare to see some specimens with soft parts. Therefore, details of internal morphology and glochidia are still completely unknown for several species. This lack of information and material is an impediment to reveal the real diversity of our mussels and discuss their phylogenetic relationships. These issues conducted us to São Francisco River in a quest for *Diplodon* species described by Spix in Wagner (1827). This river is also the type locality of *D. ellipticus*, type species of the genus, elected by Simpson (1900). Unfortunately, Spix in Wagner (1827) do not mention exactly where in the São Francisco River they collected the specimens. The São Francisco River is the biggest river running entirely in Brazilian territory, for 2,863 km from its headwaters in the state of Minas Gerais to the mouth in the borders of the states of Sergipe and Alagoas (Fig. 1). Where can we try to find D. ellipticus and other freshwater mussels at São Francisco River? The best solution would be to survey the entire river, but, this challenge was not possible for various reasons, as time and money. Fortunately it was possible to find some clues at the detailed travel book of Spix and Martius in Brazil (Spix & Martius, 1938); even so, it was difficult to discover exactly where they collected the mussels. However it was possible to know that they crossed São Francisco River in three points: Porto do Salgado (nowadays Januária, state of Minas Gerais), Caninanhas (border of states of Minas Gerais and Bahia) and Juazeiro (border between states of Bahia and Pernambuco). After studying maps and

Figure 1 – São Francisco River catchment. The red circle indicates the area surveyed. Map modified from http://pt.wikipedia.org/wiki/Bacia_do_rio_S%C3%A3o_Francisco.

bibliography, we began to prepare for our field trip.

The collecting stations chosen along the São Francisco River and its tributaries included five municipalities (Juazeiro, Casa Nova, Curaça, Petrolina and Lagoa Grande) in two states (Bahia and Pernambuco). This area belongs to the Brazilian semi-arid region, a very poor and dry area. The mussels were searched for in all suitable places like soft substrate, among pebbles and at roots of aquatic vegetation. Bare hands and feet were used to find the adult specimens of Hyriidae and Mycetopodidae; for the juvenile of these families, for adults of Corbiculidae and Sphaeriidae a handled metallic scoop was used. Few malacological surveys had previously been done in these states; for this reason, we also collected all freshwater gastropods found in order to prepare a list of molluscs of this area.

The surveys of the São Francisco River returned a rich fauna of freshwater mussels, besides other snails. Representatives of all bivalves families mentioned above were found, although it was not possible to find the native corbiculids, only introduced species. We were not able to find a specimen that matched exactly with Spix's drawings and Wagner's description of Diplodon ellipticus. However, we found samples of others species of Diplodon, that are now under study to reveal the correct identification. Specimens similar to Diplodon rhombeus (Fig. 2) and Diplodon rotundus, also described by Spix, were also found in some collecting stations. In other words, we don't found everything what we were looking for, but a precious and important material of Diplodon was found. This material is important to describe previously unknown data as the internal morphology and glochidia of Diplodon rhombeus.

There are also little know species of

Mycetopodidae mussels in the São Francisco River and this is also a great opportunity to study them. Anodontites trapezeus (Spix in Wagner, 1827), Anodontites trapesialis (Lamarck, 1819), Fossula fossiculifera (d'Orbigny, 1835) and Mycetopoda siliquosa (Spix in Wagner, 1827) were some of the mycetopodids found. This is also an important sample of our fauna in view that all of these species are listed in the Brazilian Red Book (Amaral et al. 2008). As threats to this fauna, there are the modification of habitat and the introduction of exotic species. Two introduced corbiculid mussels were found at São Francisco River, Corbicula fluminea (Müller, 1774) and Corbicula largillierti (Philippi, 1844), sometimes in large amounts. These species are widespread in Brazil, causing ecological and sometimes also economics problems.

The field trip to the municipality of Juazeiro and surroundings, at the border of states of Bahia and Pernambuco, in Northeast Brazil. was supported by Unitas Malacologica Student Award 2012, and by Conselho Nacional de Pesquisas (CNPq/PROTAX 562291/2010-5). We specially thank the Unitas Malacologica, whose funding was crucial to the success of our expedition, contributing, not only for the knowledge of freshwater bivalves but also to the knowledge of every associated molluscs fauna.

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Figure 2 – Diplodon rhombeus Spix in Wagner, 1827 from São Francisco Basin. Scale = 1 cm.

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REPORT

World Congress of Malacology (WCM2013) Ponta Delgada – 21-28 July, 2013

The World Congress of Malacology is the emblematic event of Unitas Malacologica (UM) and is organized every three years. This 18th UM congress – the 6th of worldwide reach and the first after UM, European in origin, has become a world association – took place at the University of the Açores in Ponta Delgada, from 21 to 28 July, 2013. Sponsored by UM, it was jointly organized by CIBIO-Açores of the Department of Biology of the University of the Açores and by Sociedade Afonso Chaves.

Participants

With an overall total of 432 registrations from 55 nationalities, the event had 409 participants from 41 countries. Besides the equilibrium men/women, it is worth mentioning the Portuguese participation, the second in numbers after the North American delegation, thus showing the interest from national researchers for this worldwide meeting (Figure 1).

FIGURE 1. Distribution of participants by country of origin; also represented is the proportion men/women (overall 50/50).

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The Congress

The WCM2013 took place at the amphitheater complex and the science complex of the Ponta Delgada Campus of the University of the Açores, and was preceded by a "icebreaker" at the Cultural Centre of Ponta Delgada, kindly offered by the local Municipality. Present at the inaugural session were the Rector of the University and the Regional Director for Tourism in representation of the Regional Secretary for Tourism and Transportation. The opening address was given by the Canadian researcher Verena Tunnicliffe.

OXFORD

UNITAS MALACOLOGICA The congress ran in parallel sessions organized by 22 themes, during which 244 oral presentations were given, and by a poster session where 165 posters were commented. Over one thousand authors contributed to the presentations.

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A significant portion of Unitas Malacologica funds is dedicated to sponsor the participation of students and researchers from faraway countries; however, the congress alone supported the 66 grants totaling 33,300 euros. There was high participation of students (41%), thus sending a message of continuity in the interest for this event.

The closing address was given by the British researcher Robert A.D. Cameron and had the presence of the Mayor of Ponta Delgada

The congress dinner was at the emblematic Coliseu Micaelense, where the Banda Ligeira de Nossa Senhora da Luz entertained the guests; at that time, the presentation and poster awards to the students were distributed.

Detailed information on the congress is provided in the "Book of Abstracts", supplement 8 of *Açoreana*, the bulletin of Sociedade Afonso Chaves.

Repercussions

The media (TV, radio and newspapers) followed the congress closely, thus providing the Azorean people with information about the nature and scope of the works being presented.

The congress included a free day so that the participants could know better the island and its people. Besides, many participants brought in accompanying friends and family, extending their visit before or after the week of the congress.

From a survey to the participants, it was a generalized feeling that the congress achieved high scientific quality in the works presented, the organization handled well the unfolding of the event, and the chosen environment – the University of the Açores in the town of Ponta Delgada in the island of São Miguel – was excellent.

Financing and Sponsorship

Besides the financing resulting from registration, the WCM2013 benefitted from the sponsorship of the following institutions:

- Secretaria Regional do Turismo e Transportes
- Secretaria Regional da Educação, Ciência e Cultura
- Fundação para a Ciência e Tecnologia
- Câmara Municipal de Ponta Delgada
- Câmara do Comércio e Indústria de Ponta Delgada
- SATA Internacional

Also, the following institutions were formally associated to the event:

Zookeys; Taylor & Francis; Oxford University Press; The Malacological Society of London; American Malacological Society; Instituto Português de Malacologia; Sociedad Española de Malacologia; Cephalopod International Advisory Council.

Ponta Delgada, January 18, 2013

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