



Rio de Janeiro, January 14th, 2019.

Dear Ron,

I am sending to the Conservation Committee/SDCOS the final report related to the **Restinga Viva Project / Training of Public School Teachers for Conservation**, that was developed between February and September 2018.

The second stage of the Restinga Viva Project focused on training school teachers of the municipalities of Cabo Frio and Arraial do Cabo to be agents of change in the Conservation of the “restinga”. A group of 27 teachers from 18 public local schools participated on a course of 40 hours “Qualification of educators about the Restingas of “Região dos Lagos”. Park rangers and members of the Environmental administration of Cabo Frio have also participated. The course had a total of 35 participants.

The goal of this part of the Project Restinga Viva was to multiply the number of adults and children in the region that are aware of the value of conservation of the environment that surrounds them. By attending the two days course given by eight invited experts about different aspects of the local “restingas” and developing projects with their students, we have succeeded in reaching our goal to a certain degree. There is much more to be done in respect to Education and Conservation of the area.

As we started to plan the course, it became clear to us that we would be able to work only with educators from Arraial do Cabo and Cabo Frio municipalities. To include teachers from all the 6 municipalities within the State Park of Costa do Sol would be very difficult for strategic reasons and money constrain. This was a good decision, as we were then able to work with many educators from the two municipalities. Some of the teachers worked also at a Technical school in Saquarema municipality.

Due to money limitation we decided to print 25 set of the “File cards of plants and animals of the Cabo Frio Center of Flora Diversity: Massambaba sand dune vegetation” and distribute one per school instead as per teacher that participated in the course. One of the schools was represented by 5 teachers and we presented that school with two sets of the cards. The remaining copies were given to other institutions that participated.

The big national strike that occurred during the activities period was a disruption to the original planning and it was necessary to make a whole new schedule, with both the Education Offices and with the professors that we had invited. We succeeded in re-scheduling the course and all the activities happened as planned. Nevertheless, the strike and change of dates interfered with the media disclosure.

Unfortunately our communication with the teachers was difficult and considered inefficient after the course. A two weeks Winter holidays started just after the final activity and when we re-started to send emails to all, we did not have replies from most of them. As one consequence of this, we believe that not many of the projects proposed by the teachers were implemented. We will approach them again this year.

We used the references survey made during the 2015-2016 phase of the Project to organize pdf files of articles on different aspects of the region: (1) General about the region; (2) Vegetation and its uses; (3) Environmental management; (4) Geology and Archeology; (5) Geography and Geomorphology and (6) Fauna. A Google Drive folder with 55 files was sent to all the participants and included seven of the eight ppt presentations given during the course.

On February, at the beginning of the 2019 school year, we will be communicating with the teachers by Whatsapp and stimulating them to develop activities related to the diversity and conservation of the restingas.

Please find the final report attached, the financial report, the press office report and a video made at a private school in the municipality of Armação dos Búzios, where the set of cards are also being used.

Once more, we thank you very much for the financial support given to the Restinga Viva Project. It was fundamental for our activity to happen.

Sincerely yours,

Maria do Rosário de Almeida Braga.



INSTITUTO BRASILEIRO DE BIODIVERSIDADE
PROJETO RESTINGA VIVA

<p style="text-align: center;">RESTINGA VIVA PROJECT</p>
<p style="text-align: center;">ACTIVITY REPORT:</p> <p style="text-align: center;">Course for Qualification of Educators about the “restingas” of the Lakes district (“Região dos Lagos”), RJ, Brazil..</p>
Date: May10th, June 8th and 21st, 2018.
Locality: Municipal School Maestro Rui Capdeville - Cabo Frio/ RJ.
Target Audience: Teachers of 6th to 9th year from public schools of Cabo Frio and Arraial do Cabo municipalities.
Team: Maria do Rosário de Almeida Braga (Coordinator of Restinga Viva Project); Camila Meireles, Diana Kaplan and Fernanda Saleme (environmental educators of Restinga Viva Project) and invited professors: Alexandre Ferreira, Bruno Coutinho, Helena Bergallo, Carlos Frederico Rocha, Eduardo Pimenta, Thaís Baptista da Rocha, Nina Monteiro and Kátia Mansur.
The “Instituto Brasileiro de Biodiversidade” (BrBio) acted as: <input type="checkbox"/> Invited <input checked="" type="checkbox"/> Organizer <input type="checkbox"/> Sponsor <input type="checkbox"/> Other: _____
Partner institutions involved in the realization of the activity: “Secretaria de Educação de Cabo Frio” and “Secretaria de Educação, Ciência, Cultura e Tecnologia de Arraial do Cabo”.
Number of people involved in the activities: 17 teachers from Cabo Frio and 10 teachers from Arraial do Cabo, from 18 schools of the 2 municipalities. We had also 09 invited participants from Cabo Frio municipality and park rangers from “Costa do Sol” State Park. In total, there were 35 participants.
Goal: Qualify teachers from public schools of Cabo Frio and Arraial do Cabo municipalities about the diversity of the “Restingas” and use of the “Fichas dos Seres do Centro de Diversidade Vegetal de Cabo Frio” (File cards of plants and animals of the Cabo Frio Center of Flora Diversity).



INSTITUTO BRASILEIRO DE BIODIVERSIDADE
PROJETO RESTINGA VIVA

Presentation and Distribution of any courseware? No () Yes (X) Of what type?

- Oral presentations were afterwards also distributed as pdfs to the teachers.
- File cards of plants and animals of the Cabo Frio Center of Flora Diversity: Massambaba sand dune vegetation to each of the 18 schools of Arraial do Cabo and Cabo Frio, represented by the 27 teachers; to the “Bandeira Azul” (Blue Flag) Program and to the Technical School of Saquarema municipality.
- Field guide: Birds of Cabo Frio - RJ and books: Birds from the Araruama Lagoon (E. Pimenta and A. A. Trindade Marques) and “Os Super Feras” (Katia Mansur) were distributed to all participants.

Any unforeseen event? The dates for the activities had to been changed due to a general strike.

DESCRIPTION OF ACTIVITY, OBSERVATIONS AND/OR COMMENTS

To organize the course the coordinator of the “Projeto Restinga Viva” made many contacts and some visits to Arraial do Cabo and Cabo Frio municipalities Education secretaries during the first months of the year. The numbers of participants for each of the two municipalities was defined as well as the fact that the two Education secretaries would select the teachers to participate in the course. The ones chosen to participate were teachers of Science, History, Geography, English and PE.

For the final arrangements and plan the activities, the Environmental Education team of the Restinga Viva Project organized a visit to Cabo Frio on May 10th 2018. We visited the school “Escola Municipal Maestro Rui Capdeville” and the “Peró” sand dune vegetation, where the field trip was planned to occur.

Program

- First day of activities: (June 6th 2018, Friday)

8h – 8h30: Welcome and tematic breakfast (with products from the “restinga”).

8h30 – 9h: Presentation of the “Restinga Viva” Project and dinamic of introduction of the teachers - Maria do Rosário de Almeida Braga and Fernanda SalemeThe ;



INSTITUTO BRASILEIRO DE BIODIVERSIDADE
PROJETO RESTINGA VIVA

9h – 10h: Presentation of the “Fichas dos Seres Vivos” Project (Living Organisms Cards) of NUPEM/UFRJ (Core/”Núcleo” in Ecology and Environment of Macaé / Federal Univ. of Rio de Janeiro) – Prof. Dr. Alexandre Ferreira Lopes (UFRRJ);

10h – 10h15: Coffee Break.

10h15 - 11h15: Vegetation types of the “Restingas” of the “Região dos Lagos” – Dr. Bruno Coutinho Kurtz (Rio de Janeiro Botanical Gardens);

11h15 - 12h. Invasive Species – Prof. Helena Bergallo – (Universidade Estadual do Rio de Janeiro / Ecology Deptment);

12h - 13h. Lunch.

13h – 14h. Climatic change and the threatened fauna of the “restinga” – Prof. Carlos Frederico Rocha – (Universidade Estadual do Rio de Janeiro / Ecology Deptament);

14h15-17h. Field activity in the Peró “restinga” and activity guidance to develop with students in the schools (the teacher will have to use the published cards in class or in the field and present the work on June 21st).

- Second day of activities: (June 21st, 2018, Friday)

08h00 - 08h30: Confraternization and tematic breakfast;

08h30 - 09h15: Birds of the “Região dos Lagos” sand dune vegetation – Prof. Eduardo Pimenta (Universidade Veiga de Almeida, Cabo Frio Campus);

09h15 - 10h00: Geomorphologic Diversity of the “Restingas” of the Diversity Center of Cabo Frio - Prof. Thaís Baptista da Rocha (Universidade Federal Fluminense / Physical Geography Deptament);

10h00 -10h15: Coffee break;

10h15 -11h00: Flora of the “Restinga” and threats – Nina Monteiro (CNCFlora);

11h00-12h00: Geology and Geological Heritage in the “Região dos Lagos” sand dune vegetation – Prof. Katia Mansur (Universidade Federal do Rio de Janeiro / Geology Deptament);

12h00-13h00: Lunch;



INSTITUTO BRASILEIRO DE BIODIVERSIDADE
PROJETO RESTINGA VIVA

13h00-16h00: Presentation of the individual projects.

16h-17h: Teachers evaluation and certificates delivery.

Results:

- Welcome and thematic breakfasts

We begin with a breakfast with “breads from the “restinga”, with fruits of *Schinus terebinthifolius* (“aroeira”/Brazilian peper) and *Allagoptera arenaria* (“guriri”), served with “guriri” jam and cake with Brazilian peper. It is important to say that it is a homemade and sustainable production and that the fruits used were picked up outside the area of “Costa do Sol Sate Park”. The breakfasts were a big success.

- Presentation of the “Restinga Viva” Project and dynamic of introduction of the teachers - Maria do Rosário de Almeida Braga and Fernanda Saleme.

Maria do Rosário gave a quick presentation of BrBio, the San Diego County Orchid Society, that sponsored the course and the “Restinga Viva” Project. She was followed by Fernanda Saleme, who presented the goals of the course, the “File cards of plants and animals of the Cabo Frio Center of Floral Diversity: the Massambaba sand dune vegetation” and presented some of her experience taking students to the “Peró” sand dune vegetation. Fernanda’s presentation had also as a goal to guide the educators in creating an activity with their students which is a proposal of the course.

- During two days, the eight talks, given by specialists on the different fields of knowledge were full of new information about various aspects of the Cabo Frio Center of Vegetation Diversity, that includes all the region.
- Field activity at the “Peró restinga” and guidance to the teachers for activities to develop with their students.

In the afternoon of the first day we took all the participants to the Peró restinga for field activities. The environmental educator Camila Meireles gave a briefing about the conscious conduct while in the sand dune vegetation. She talked about the best way to interact with this environment, making the least possible negative impact, and also about some important aspects about the restinga. After that we walked along a short trail and arrived to the heart of that fragment of sand dune vegetation. Along the way Dr. Bruno Kurtz, botanist, talked about the features of the vegetation, highlighting some aspects that he has mentioned during his talk in the morning.



INSTITUTO BRASILEIRO DE BIODIVERSIDADE PROJETO RESTINGA VIVA

After that the teachers participated in an activity called “Gymkhana in the Restinga”. The participants were divided into different groups and each of them had to find certain elements of the ecosystem. The goal of this activity was to present many of the environment peculiarities, for the teachers to perceive the complexity of the features that together make this rich and singular restinga. We concluded this activity with a discussion about all those factors and importance of including the social reality in this contextualization. Following this, Dr. Eduardo Pimenta, specialist on birds, together with his partner Antonio Angelo Trindade, talked about the birds present in the region during all year around. We could have spent much more time in the field if we had that choice and we discussed this with the teachers. We also talked about some activities that can be developed in the classroom, considering the difficulties faced by the public schools to take students in field trips. To conclude the afternoon activities, we discussed the many ways for the teachers to develop their “homework”, a main requirement of the course. On the way back to the city, during the bus trip, the teachers were presented to a “Sensory Box” of the Restinga, stimulating the development of other senses than the visual.

PROPOSALS OF ACTIVITIES ABOUT THE RESTINGA

In the afternoon of the second day of the course, the teachers participating presented their proposals or activities already developed with their students. From the 27 teachers, 24 were able to present something using the “File cards of plants and animals of the Cabo Frio Center of Flora Diversity: Massambaba sand dune vegetation” (here named as “the cards”).

The proposals are summarized below:

1 – Lucília Moreira (E.M. Profa. Marcia Franciscone Pereira, Cabo Frio, Science – year 5, 6 and 7): she photographed with her cell phone species found in the restinga and asked the students to identify them, using the cards with plants and animals.

2 and 3 – Ana Cristina de Jesus (E.M. Vera Felizardo, Arraial do Cabo) and Rocheli de Lima (E.M. Maria Tania Avila, Cabo Frio) – both schools are located close to the restinga. The 2 teachers got together to think on a proposal but they will work separately. They took the students to the school Garden and found many species from the restinga. The students worked with the cards to identify what they had seen.

4 – Eduardo Gabriel Pinto (E.M. Prof. Edilson Duarte, Cabo Frio – year 7 and 9 and high school) – students went to the school garden, where they found many species from the restinga. They photographed the different plants and animals with their cell



INSTITUTO BRASILEIRO DE BIODIVERSIDADE
PROJETO RESTINGA VIVA

phone and had to identify them..

5 and 6 – Danielle de Almeida and Katiane Santos (E.M. Profa. Wanda Roque, year 6 to 9) – they presented a proposal to organize a Field trip during one school Saturday, to a nearby area, to observe species from the restinga. Work to be done together with Maths teacher, quantifying the species and creating graphics.

7 – Flávia Martins – (Agriculture Technical School Nilo Batista, Cabo Frio, 2nd and 3rd year of high school) – Proposal of creation of a trail within the school yard, for students of Agro-tourism to guide younger students. The environment surrounding the school is of a dry forest, where some of the species from the cards are found. A second proposal is for the students to create a new set of cards, with species from the area.

8 – Jean Moreira – (E.M. Francisco Porto de Aguiar, year 8 and 9 and 3rd year of high school) – His proposal is to be implemented in 3 steps, and includes Geography classes, in which he is teaching environmental perception. 1st step: discussion about what the students imagine a restinga is; 2nd step: Field visit when the students will take photos with their cell phones, identify the species with help of the set of cards product from the Restinga Viva Project. They will also look for the presence of garbage and other environmental problems; 3rd step: the students will be asked to point to solutions and present them in some artistic way (drawing, theatre, music and so on). Jean called our attention to the importance of working with multiple intelligence and with emotions.

9 and 10 – Delenice Batista (E.M. Teixeira e Souza, years 6, 7 and 8) and Lidia Mendes (E.M. Edith Castro and private school Palmeira, years 6 and 8) – A joint proposal that each teacher will develop at the school they are working at. Both school are at restinga areas. The students will get familiar with the set of cards and will take them to the school yard, using their cell phones to photograph the species found . The subject will be part of Maths and Arts classes.

11 to 17 – Isis da Silva, Lucenilda da Silva, William Rodrigues, Ana Cristina de Jesus, Renata Cordeiro, Romão Flausine, Raquel Rosa (all of them from the E.M Adolfo Beranger) They teach Science, Geography, History, English and PE to kids and teenagers from year 6 to 9 and adults from EJA). Each of them talked about the work they are developing. The Geography teacher gave her students a quiz about the social-environmental diagnoses. The English teacher worked with the fauna and flora vocabulary. Some took their classes to the school yards and vegetable gardens,



INSTITUTO BRASILEIRO DE BIODIVERSIDADE
PROJETO RESTINGA VIVA

photographing the species found. All of them intend to work within and about the restinga, talking about conservation.

18 – Daniel Costa and Raquel Rosa (E.M. Francisco Luis Sobrinho, Arraial do Cabo, years 6 to 8 and EJA) – They proposed a elaboration of a questionnaire for the teachers to have a diagnosis of their students knowledge about the restinga. Classes were taken to the school yard to observe the plants and it was clear for the teachers that the students reacted well the outdoors activity. To the adults of EJA, who study by the evening, the teachers proposed to take to the classroom examples of species restinga.

19 – Izabelle Bessa (E.M.. Thalita Hernandez Perelló, Cabo Frio, years 6 to 8, Geography) – Proposal to take the classes twice to the restinga. First visit would be for the students to have a general view and second visit for a more detailed and critical view. The students will work also the town history, arts (photography and drawing), Portuguese, Maths, PE, English and Science. She will also propose to the students to create a restinga garden at the school yard.

20 – Érica Moura (E.M. Edith Castro dos Santos, Cabo Frio) – Proposal of activity inside the classroom and also in the restinga area next to the school. She will start by calling the students attention to the local birds.

21 and 22 – Aline Monteiro (E.M. Profa. Marli Capp, Cabo Frio, year 7 and 3rd year of high school) and Franciene da Mata (E.M. Luis Lindenberg, Cabo Frio) – They have worked in the classroom with the sets of cards and the students should draw the species they most liked and say why they have chosen them. Students from the high school were taken to restinga area near the school and made observations about the different species. The students also discussed about the invasive species.

23 – Roberto Noronha – (E.M. Evaldo Salles, year 6 and 8 and Technical School FAETEC, Saquarema Campus) - Proposal of taking students to the restinga, using the set of cards to identify the species. Intends to work together with Maths teacher.

24 – Krystina Correia (Secretaria de Educação de Cabo Frio and Technical School FAETEC, Campus Saquarema) – Proposal of a didactic approach to the study of the restinga, using photography and filming.



Figure 01: Municipal School Maestro Rui Capdeville (Cabo Frio,RJ), school offered by the Education Secretary of Cabo Frio, to host the “Curso de Qualificação de Educadores sobre as Restingas da Região dos Lagos”. Photo: Camila Meireles.



Figure 02: Rosário Braga with the director of the Municipal School Maestro Rui Capdeville (Cabo Frio, RJ). Photo: Camila Meireles.



Figura 03: Restinga Viva team during technical visit to the restinga of Però Beach (Cabo Frio, RJ) in preparation to the practical class of the course for teachers. Photo: Camila Meireles.



Figure 04: Restinga Viva team and Krystina Correa (2nd from left), during visit to the Education Secretariate of Cabo Frio, to organize the qualification course. Photo: Leonardo Vidal.

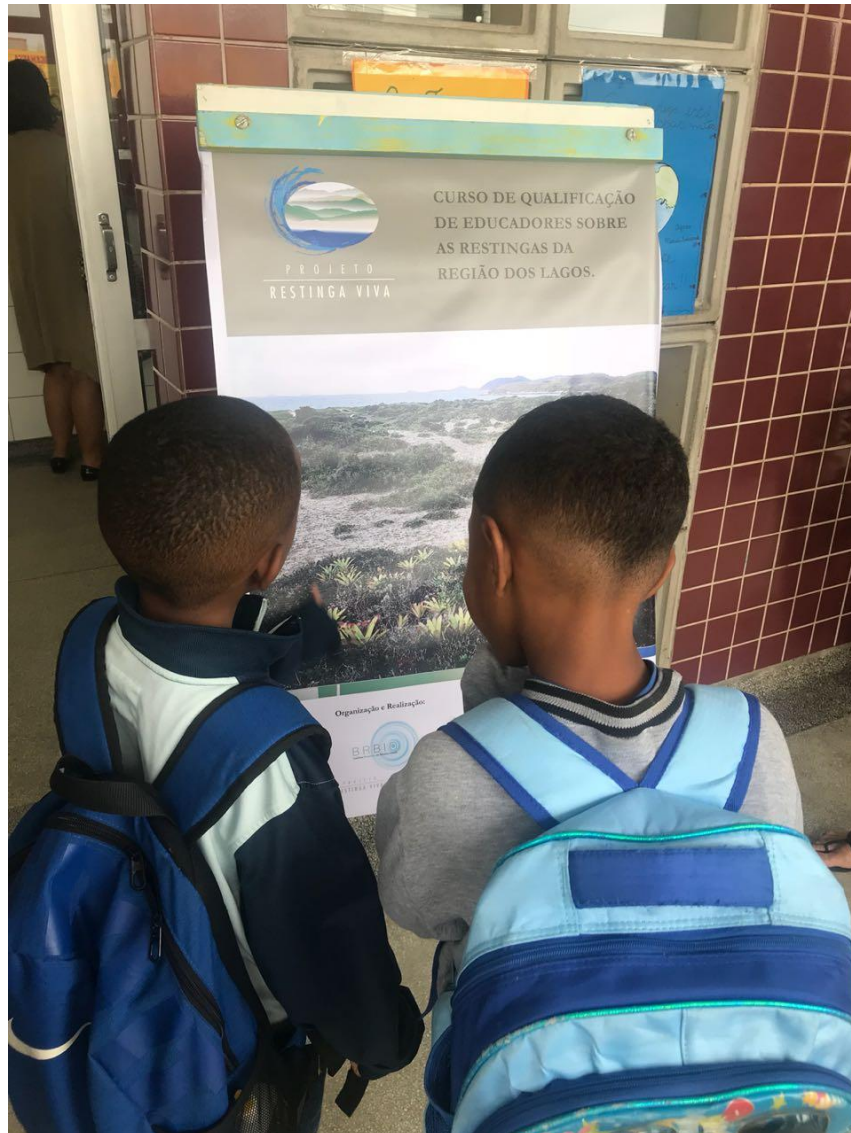


Figura 05: Outdoor exposed at the entrance of the Municipal School Maestro Rui Capdeville (Cabo Frio, RJ) during the qualification course. Photo: Arquivo BrBio.



Figure 06: Welcome Breakfast offered to the participantse of the course, with products from the restinga. Photo: Tim Moulton.



Figure 07: Rosário Braga introducing BrBio team. Photo: Tim Moulton.



Figure 08: André Cavalcanti, head of the Costa do Sol State Park, speaking about the importance of the qualification course, at the beginning of the 1st day. Photo: BrBio.



Figure 09: Talk about the “Projeto Fichas dos Seres Vivos do Parque Nacional Restinga de Jurubatiba, Macaé, RJ” (Project Cards of Living Beings from the Jurubatiba Restinga National Park, Macaé, RJ), given by Alexandre Lopes, PhD, from the Universidade Federal Rural do Rio de Janeiro. Photo: Tim Moulton.



Figure 10: Audiência de participantes durante apresentação do “Projeto Fichas dos Seres Vivos do Parque Nacional Restinga de Jurubatiba, Macaé, RJ”. Photo: BrBio.



Figure 11: Talk about the different vegetation types of the Restingas of the “Região dos Lagos”, given by Bruno Kurtz, PhD, from the Rio de Janeiro Botanical Gardens. Photo: Tim Moulton.



Figure 12: Talk about Invasive Species, given by Helena Bergallo, PhD, from Universidade Estadual do Rio de Janeiro. Photo: Tim Moulton.



Figure 13: Talk about Climatic Changes and the Restinga threatened fauna, given by Carlos Frederico Rocha, PhD, from Universidade Estadual do Rio de Janeiro. Photo: Tim Moulton.



Figure 14: Briefing about conscious behaviour while at conservation areas, given by Camila Meireles, environmental educator from the Restinga Viva team, before field class at the Peró restinga. Photo: BrBio.



Figure 15: Group of participants listening to instructions related to the activities to be developed at the restinga of Peró Beach. Photo: Tim Moulton.



Figure 16: Participants and organizing team of the qualification course, at the end of the class at the Perú Restinga (Cabo Frio, RJ). Photo: Tim Moulton.



Figure 17 Park rangers of the “Parque Estadual da Costa do Sol”, taking part at the activities developed during field class. Photo: Tim Moulton.



Figure 18: Bruno Kurtz, PhD, from the Rio de Janeiro Botanical Gardens, during field class in the Peró Restinga. Photo: Tim Moulton.



Figure 19: Talk about the Bird fauna of the Restingas of the “Região dos Lagos”, given by Eduardo Pimenta, PhD, from Universidade Veiga de Almeida/Cabo Frio Campus , during the second day of the qualification course. Photo: BrBio.



Figure 20: Talk about the Geomorphological diversity of the Restingas of the CDVCF, given by Thaís Baptista da Rocha, PhD, from the Universidade Federal Fluminense. Photo: BrBio.



Figure 21: Talk about Restinga Flora and its Threats, given by Nina Monteiro, MSc., from the CNCFlora. Photo: BrBio.



Figura 22: Talk about the Geology and the Geological Heritage of the “Região dos Lagos”, given by Kátia Mansur, PhD, from Universidade Federal do Rio de Janeiro. Photo: BrBio.



Figure 23: The teaching material “Fichas dos Seres do Centro de Diversidade Vegetal de Cabo Frio” being delivered to Raquel de Melo Rosa, teacher at the “Escola Municipal Francisco Luis Sobrinho”, Arraijal do Cabo municipality. Photo: Tim Moulton.



Figure 24: Ana Cristina Vasconcelos de Jesus, teacher at the “Escola Municipal Vera Felizardo”, Arraial do Cabo, presents her 7 year students work about the resitinga in their neighborhood, developed after the 1st day of the qualification course. Photo: Fernanda Saleme.

Figures 25 + 26: Both photos were sent to us by Aline Monteiro, teacher at “Escola Municipal Marli Capp”, Cabo Frio. Right: Some of her many students working at the classroom with the “Fichas dos Seres do Centro de Diversidade Vegetal de Cabo Frio”. Left: one of their beautiful products.





Figures 27 + 28: Both photos were sent to us by Krystina Correia, Environmental Education coordinator at the Cabo Frio Educational office and teacher at the FAETEC Technical school, Saquarema. Above: Yara Mello de Freitas with some students in the restinga. Bellow: Krystina Correia with some of her High School students and a park ranger from the State Park Costa do Sol.

