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ECOTOURISM ON MAR CHIQUITA LAGOON, CORDOBA: VISITORS CHARACTERISTICS AND PREFERENCES

SUMMARY

Mar Chiquita region (Córdoba, Argentina) is suffering, like other ecosystems in this country, a strong anthropic degradation. Considering its wonderfull landscape and wildlife, ecotourism appears as a sustainable use alternative, through its capacity to provide education, recreation, tourism, economic development and thus, new interests for ecosystem conservation. With the aim of plannifying these activities I developed, through self-guided questionnaires, a study on the characteristics and preferences of five types of visitor groups: students and teachers from school delegations, traditional summer visitors, visitors to the interpretation centre of the protected area and persons with particular interest on natural interpretation and observation excursions (defined as ecotourists). They were surveyed at Miramar, the only coastal town of the lagoon, that has tourism and fur industries as traditional activities.

School groups had a strong reduction in the number of visitors on 1993 (5,068) in relation to 1992 (9,362), after several years with increasing numbers. Problems with the interpretative services, particularly guides, would be reducing the experience quality. Anyway an increasing interest for the use of the area as an educational tool would exist. Nearly all students and all the teachers were interested on having more contents related to nature conservation in their studying programs. The majority of the primary school students were from the forth and fifth level (on which they usually study the region and province

respectively) and belonged to the region. Fortysix percent of them were interested in hunting. Wildlife observation and general knowledge of the place had high values, although lower than beach activities. Non traditional vehicles such as motor boats, boats and horses were preferred. The lack of knowledge of certain regional wildlife species showed deficiencies at a school level. Other species as shorebirds indicated problems with message transmission during the interpretive experience. The higher aesthetic values were related to culturally recognized beautifull species as flamingos, fishes, trees, butterflies, ducks, rhea (probably an exception) and hare. The less preferred species were peccary, chimango caracara, opossum, insects, lizard, skunk and toads and frogs. All the proposed souvenirs (fur clothes, clothes with natural local photos and drawings and posters with the same illustrations) had high interest in being bought.

Traditional summer visitors (mean= 31 years old), belonged mainly to the region, had lower educative level in relation to other groups and had a higher proportion of secoundary students, housekeepers and employees. The primary reason of the visit was the beach, camping was their most frecuent accomodation and the visit lengh had a median of two days. They were very interested on guided excursions and preferred leather made elements and clothes with local photos and drawings (landscape, wildlife) as regional souvenirs. They had little knowledge about the interpretation centre although they showed a clear interest for visiting it. The general maintenance of the beaches and the ruins from the old town were the worst things they detected as well as the camping deficiencies in relation to infraestructure and cleanliness. Amongst the most preferred activities were beach and, in secound place, the ones related to regional general knowledge, its history, wildlife and vegetation. Non traditional and/or confortable vehicles such as motor boats, car and airplane were the most chosen by this group.

Ecotourists (mean = 36 years old) were from the region, province and other areas; they were mainly professionals, employees and teachers and the educational level had a high proportion of past or present university students. The primary reason of the trip was nature watching and knowledge; 57 % used hotels as accomodations and had a visit lengh with a median of three days. They had

particular interest in guided excursions and in the adquisition of books, videos and documentaries. The worst things they detected were beach conditions, town ruins and the low touristic infraestructure and utilization. Nature watching and knowledge was the first activity chosen followed by beach activities. Boat and trekking were the main ways of moving chosen by them.

Visitors to the interpretation centre (mean= 38 years old), came mainly from Córdoba city, being mainly housekeepers, retired people or office worker, showed an intermediate position between the other two groups. In general, they were closer to ecotourists in relation to recreative options and ways of taking excursions, showing them as potential nonconsumptive users of wildlife.

Forty eight percent of traditional visitors, 68 % of visitors from the interpretation centre and 97 % of ecotorists, were particularly interested on nature watching and discovery. The three groups chose the observation of many wildlife species and the contact with local people as the most important characteristics of surrounding environment and excursions. The presence of other visitors was important for traditional visitors and centre's visitors. The environmental presence of farming, many domestic animals and exotic plants were accepted by the three groups.

Flamingoes, herons, trees, rhea and eagles were between the ten better qualified species for the three groups. Traditional visitors as well as centre's visitors shared flowers, fish and butterflies between the ten first species. The other species present in the ten best valuated were nutria for traditional visitors, armadillo and geoffroy's cat for centre's visitors and puma, fox, jaguar and skunk for ecotourists.

Between the ten less preferred species for the three groups were poisonous snakes, frogs and toads, opossum, ferret, non poisonous snakes and chimango caracara. Traditional visitors and centre's visitors also included in this group the skunk, lizard and peccary. Ecotourists chose between the last ten insects, cuis, hare and butterflies and traditional visitors included shorebirds. These results considered the "unknown species" answers with a value of zero (scale 1:I don't like it - 5: I like it absolutely). The values obtained in such a way that the "unknown" answer was not considered, had an important increase for the less known species (this phenomenon occurred also on students survey). Thus, for the three groups, river otter and brocket became between the four more chosen. Shorebirds and pampas deer were included between the first ten for centre's visitor and ecotourists included geoffroy's cat, capybara and peccary. In the three groups easily and frequently seeing birds had a lower value than those difficult or infrequently seeing.

Economic potentials of ecotourism are shown in the following estimators: a) in 1993 educative groups would have spent \$73,335 (\$14.47 each person) for the whole visit, generating a gross income to Miramar of \$18,333 (\$3.61 each person); b) each year a system with low fees for interpretive services and souvenirs marketing could generate a net income of \$16,500 for the protected area, which had an annual budget of about \$6,000 for 1993; c) local tourism operators could have a summer gross income of 20,000 based on interpretive excursions for traditional visitors.

I discuss and give recommendations in relation to:

. The educative value of living knowledge of ecosystem and ecosystem conservation.

. The need to find solutions both to economic restraints and to teacher responsabilities on schoolar visits.

. The importance of audio and wildlife watching tools (prismatics, telescopes) for the quality of the experience.

. The need for teacher trainning, to stimulate student's nature knowledge and also the interest for this type of visit.

. The need for another park ranger particularly dedicated to summer visitors and educative groups.

. The extreme importance of guide quality and the generation of a ecotourism provincial course for guides.

. The current interest and money availability from visitors and their implications for the future of ecotourism.

. The creation of interpretive excursions and trails according to traditional visitors' passivity.

. The organization of a fee system and souvenir marketing in the protected area.

. The creation of a Miramar shop in Cordoba city to capture transportation expenditures and promote the natural area.

. The importance of popular knowledge about native species as a way of valuing and preserving their natural heritage.

. The ecological and economical importance of the conservation of the pond and the regional forests and rivers.

. The need to continue with research and plannning in the area.

Conclusions show the existence of an interesting potential on educative tourism as well as on traditional visitors tourism, with a remarking lack of knowledge on natural heritage but, on the other hand, with particular interest for discovering it. The typical ecotourist that could become an important support for ecosystem conservation should receive promotion only when services quality and environmental impact control would have been assured.

Recommendations are focussed on different institutions with abilities to contribute to the development of these recreative and touristic activities.

<u>Key words:</u> characteristics, ecotourism, Mar Chiquita lagoon, nonconsumptive use, preferences, protected areas, recreation, visitors, wildlife.

Table 1. Aesthetic preferences for species or species groups by traditional summer visitors, visitors to the interpretation centre and ecotourist.

Question: How much do you like to see the following animals when you are living a excursion in the natural environments of this reserve?

Options: I don't know it (processed as "0" value), I don't like it (value: 1), I like it very little (value: 2), I like it (value 3), I like it very much (value 4) and I like it absolutely (value: 5)

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	Traditional summer vis.	Visitors to the Interpret. Centre		Ecoturists	
Species or Species groups	- X	– X Ra	anking	- X Ran	king
Flamingos	4,30	4,45	1	4,89	1
Butterflies	3,78	4,03	8	3,89	25
Herons	3,76	4,21	2	4,53	10
Rhea	3,70	4,08	6	4,66	5
Nutria	3,66	3,72	11	4,16	22
(Myocastor coy	rpus)				
Eagles	3,51	4,11	4	4,89	1
Armadillo	3,46	4,11	4	4,47	12
Brown brocket	3,39	3,67	13	4,47	12
Turtles	3,33	3,64	14	4,32	18
Ducks	3,33	3,71	12	4,38	17
Cougar	3,32	3,60	15	4,71	3
Fox	3,22	3,44	19	4,68	4
European hare	3,18	3,44	19	3,79	27
Jaguar	3,18	3,53	16	4,66	5
Geoffroy's cat	3,13	3,73	10	4,42	15
(Felis geoffr	roy)				
Capybara	3,06	3,50	17	4,50	11
Cuis	2,95	3,15	24	3,92	24
(Microcavia au	istralis - Cav	riidae)			
Insects	2,72	3,43	21	3,13	33
Peccary	2,71	2,86	30	4,24	20
Lizards	2,66	2,89	29	4,29	19
Chimango carac	ara 2,63	2,94	28	3,68	30
(Milvago chima	ingo - small s	cavenger)			
Shorebirds)	2,62	3,21	23	4,42	15
Non poisonous	snakes 2,53	2,54	31	3,7	29
Ferret(Galicti	<i>s cuja</i>)2,50	3,12	25	3,79	27
Skunk	2,48	3,06	26	4,55	9
Opposum	2,41	3,03	27	3,84	26
(Didelphis alv	riventris)				
Frogs and toad	ls 2,18	2,53	32	3,68	30
Poisonous snak	es 2,09	2,03	33	3,58	32