

Repeat Landscape Photography in Susquehanna

County, PA Jessie Comba & Jim Lassoie

Pp # 14 Transect 3

Agricultural Fields and Stonewalls



Cultural conservation

- stonewalls (sold for quick revenue)
- old barns

What is the Susquehanna photomonitoring project about?

Photomonitoring is the process of monitoring landscape change through the use of photographs. This qualitative research tool has proven very effective in gaining public support and documenting changes in the land. Another term used to describe this technique is repeat historical photography, which simply compares pictures from many years ago to recently re-photographed pictures from the same photo point as the original. These pictures are then compared to one another to see how the landscape has changed over time. Hypotheses can be determined for possible reasons of change and methods of further conservation can be enacted. This documented proof of landscape changes makes it easier for people to understand conservation and the effect that it will have on their community therefore more likely to support its implementation.

The Department of Natural Resources has had ongoing conservation planning with the E.L. Rose Conservancy of Susquehanna Co. since 1999. On this project we have photographed over six-hundred geo-referenced pictures along eight transects and are in the process of establishing a historical and current photo-database to be archived with the conservancy and the historical society. The database will enable a future database and improved strategies and implementation of conservation goals for the E.L. Rose Conservancy.

Methodology

- methodology was based on Dr. Lassoie's China project and then adapted to conservation planning on a smaller scale
- Cameras: Nikon D200 and Nikon CoolPix8800
- 7 road transects N to S
- 1 road transect W to E
- Avg. 24 photopoints per transect
- Multiple geo-referenced photos per photopoint
- Stopped approx. every 5-10 miles to photograph the landscape

Silver Lake Early 1900s



Changes over time

- Increased shoreline development
- Tree species composition

Present



Quaker Lake Early 1900s



Changes over time

- very heavy shoreline development (lawns)
- woody debris removed
- houses packed together
- tourism



Pp # 8 Transect 3



Riparian habitat without disturbance

- Increased wildlife diversity
- Tree species and understory diversity

Possible effects of cow grazing on riparian habitat

- Two completely different habitats
- No understory growth
- Stream contamination



Agricultural and Forest Land



Clearing trees off hilltops for:

- gravel
- stone walls
- timber (less)

Rt. 29



Munger Tannery

- Changes over time
- extended forest growth
 - new agricultural business
 - road development

Present



Results of Summer Photographs

Conservation Targets

Primary

- Hardwood Forests
- Conifer Plantations
- Intact Shorelines
- Wildlife Diversity
- Riparian Areas

Secondary

- Agricultural Land
- Ponds
- Stonewalls
- Barns

Examples of Threats

- Unsustainable Agriculture
- Unsustainable Forestry
- Shoreline Development
- Track-Home Development
- Tourism
- Hilltop Clearing

Susquehanna County transect and photopoints per transect

Transect #	Road Name	# Photo Points	# Views
1	Rt. 858 continuing to Rt.367	33	89
2	Rt. 267	42	132
3	Rt. 167	26	96
4	Rt. 29	26	75
5	Rt. 11	7	23
6	Rt. 92	18	54
7	Rt. 171	13	53
8	Rt. 706	26	106
Total # trans: 8		Total # pp: 191	Total # views: 627

Continuing Plans

- Develop 'old' photo database
- Relocate and retake 'old' photos
- Develop analytical framework
- Design and archive image database
- Catalog and designate keywords

The Nature Conservancy
SAVING THE LAST GREAT PLACES ON EARTH

China Program

YUNNAN PROVINCE GREAT RIVERS PROJECT:
Ground-based Repeat Photomonitoring Study
(Lassoie *et al.* 2006)



Cornell University
Department of Natural Resources



The E. L. Rose Conservancy
of Susquehanna County