# Northeast PARC Regional Working Group August 13-14, 2002 Pocono Environmental Education Center

# **Meeting Summary of Action Items**

- 1. We had several presentations by members (see agenda), including (i) PARC background and history (ii) NEPARC Habitat Management Guidelines by Joe Mitchell, (iii) North American Amphibian Monitoring Program (NAAMP) Frog quiz by Linda Weir of USGS, (iv) Model State regulations for herps by Scott Smith of MD Department of Natural Resources, (v) evening talk on controlling invasive plants in bog turtle habitat with livestock by Jason Tesauro of NJ Fish and Wildlife, (vi) National Amphibian Atlas project by Priya Nanjappa, (vii) Taxa risk assessment by Robin Jung, NE Amphibian Research and Monitoring Initiative (ARMI) Coordinator of USGS, and (viii) Break out into one of two working groups education/outreach or taxa risk assessment.
- 2. Northeast (NE) Region Habitat Management Guidebook (HMG). Natural Resources Conservation Service (NRCS) is providing Joe Mitchell (PARC Management Technical Working Group) \$10,000 to prepare a camera ready HMG for the NE. However, we still potentially need \$25,000 for publication and distribution of the guidebook. NEPARC members felt strongly about their involvement in peer-reviewing the product prior to publication, as well as providing technical expertise. To this end, two NEPARC members were elected to collaborate with Joe Mitchell, and facilitate peer-review and technical input of the NE HMG: Al Breisch of NY Department of Environmental Conservation, and Joan Milam of Massachusetts Audubon Society. In addition, two project leaders volunteered to investigate funding solutions to the \$25,000 publication and distribution deficits: Kathy Leo of WV Department of Natural Resources, and Bob Cooke of the National Park service.
- 3. <u>NEPARC Website and List serve</u>. Linda Weir of USGS NAAMP continues to act as the webmaster, and membership is currently ~ 90.
- 4. <u>State Model Herp Regulations</u>. The NEPARC draft State Model Herp Regulations was used as a template by the Policy, Regulation and Trade (PRT) Technical Working group in developing their final version. Several improvements were made to the NEPARC version. Members communicated a desire to have NEPARC acknowledged on the final PRT version as the preliminary source for the document. Scott Smith of NEPARC is working with Bruce Taubert of PRT to implement the acknowledgment section.
- 5. <u>Risk Assessment by Taxa</u>. Project Leaders, Chris Raithel of RI Fish and Wildlife and Robin Jung of USGS ARMI, continue refining and collating data from several sources on risk assessment by taxa. Taxa are divided into four working

- groups: Squamates, Caudata, Anura, and Testudinae. NEPARC members divided into these four working groups, and provided feedback to the project leaders on data quality, criteria for risk assessment, and species vulnerability. This is an ongoing project which requires a lot of coordination.
- 6. Education and Outreach. NEPARC members selected two project items "Herps for Dummies" and "Herp Toolkit". "Herps for Dummies" would provide natural history and conservation related information in a format similar to other publications such as "internet for dummies". The intent would be to provide a user friendly publication on why herps are cool, how herps are threatened, and why we should care. "Toolkit" would be an outreach product for a variety of users, similar to "toolkits" used by other educational institutions, such as zoological parks. There are several folks involved as project leaders in these two projects.
- 7. <u>NEPARC Directory</u>. A new project leader, JoEllen Zeh, was elected to complete the project begun by Suzie Fowle. The directory would serve as an internal resource reference, but may have broader applications in the future.
- 8. <u>Current Co-chairs</u>. Al Breisch of NY DEC (00-03) and Stafford Madison of EPA (02-04). Alison Haskell is the outgoing co-chair (00-02).
- 9. <u>Outreach</u>. NEPARC members were concerned about the lack of new members, and committed to finding mechanisms to bring in new faces. Scott Smith of MD DNR and Bob Cook of NPS volunteered to spear-head this effort.

# **Meeting Minutes**

### Tuesday, August 13, 2002

12:00 pm Arrival and Registration

1:05 pm Welcome, Introduction, and Brief Update of NEPARC (Eric Stiles & Dave Golden)

1:07 pm Center Welcome, History of PEEC (Pat Shire, PEEC Naturalist)

- 22,000 people + come to visit center
- History: PEEC area use to be a honeymoon resort (1940's)
- The US Government acquired 70,000 acres for a dam but the plan fell though
- This areas became the Delaware Water Gap Recreational Area
- PEEC is a private non-profit center operating within the National Park Service Land

1:09 pm **Vision for the future, outlook for PEEC** (Rick Provosnic, PEEC Projects manager)

# 1:11pm **NEPARC history and status of priority projects** (*E. Stiles*)

- There has been a long tradition of bird conservation. The factors that were effecting birds were also effecting herps
- In response to the bird conservation, Partners in Flight was set up
- In June 1998, PARC was launched
- Alison Haskell hired to work for the federal steering committee to work on collaboration with the federal government, NGO's, and other groups
- States from West Virginia to Maine comprise NE PARC
- This is the 4<sup>th</sup> Meeting as a regional group
- Thus far some of the accomplishment of NEPARC include:
  - 1. Mission statement
  - 2. Website and listsery (Gideon Lachman, Linda Weir)
  - 3. Model herp regulations for states was adopted by National PARC (*Scott Smith*)
  - 4. Risk assessment by taxa (Robin Jung, Chris Raithel)
- Meeting planned in Massachusetts was unfortunately cancelled last year in part because of the events of 9/11

# 1:20pm Additional meeting information, announcements, food and lodging (D. Golden)

## 1:25pm **Agenda review** (A. Haskell)

# 1:27pm **NEPARC** web site and list serve (*L. Weir*)

- There is a National website (www.parcplace.org) a
- Patuxent Wildlife Research Center host the Regional Website (<a href="http://www.mp2-pwrc.usgs.gov/neparc/">http://www.mp2-pwrc.usgs.gov/neparc/</a>)
- Around 90 members currently on the NEPARC listserv

# 1:30 pm **Status Update: National PARC Technical Working Groups** (Al Breisch and A. Haskell, NEPARC Co-chairs)

- Alison Haskell's appointment for Steering committee
- Divided into regional working groups NE, SE, MW, NW, SW
- Also Grouped into different technical working groups:
  - 1. Management
  - 2. Policy, regulation and trade
  - 3. Education/Outreach
  - 4. Inventory/Monitoring
  - 5. Research
  - 6. International
- Current NEPARC projects
  - 1. Contacts and NE PARC Directory
  - 2. Taxa Risk Assessment

- 3. State Model Herp regulations, Tom French and Scott Smith led the working group that worked on Model Herp Regulation that will be adopted by National PARC for model state herp regulation
- 4. NEPARC Habitat Management Guidelines
- 5. Webpage

# 1:40 pm **NEPARC Habitat Management Guidebook** (*Joe Mitchell*)

- Management Working Group of PARC decided to work on Guidelines for Landowners
- In March 2001 there was a workshop in Chicago to set up a program that would develop Management Guidelines for each region
- Six total regions: Arid SW, Coastal SW (CA), MW, NE, SE, and NW.
- The purpose was to develop, produce and disseminate habit management guidelines for landowners in the six different regions
- PARC does not make policy or regulations but can only provide recommendations.
- Four points/goals for the HMG
  - 1. Keep common species common
  - 2. Help stem decline of imperiled species
  - 3. Guide the restoration of amphibians and reptile habitats previously degraded or destroyed
  - 4. Reduce the chances that additional species will be added to endangered species list
- Species Habitat Matrix includes the following information: species list, habitats, and indication of whether habitat is preferred/marginal
- For each habitat there is a description, list of animals found there, and then management recommendation and guidelines with a herp focus and then an integrative or multiple use management (minimizing impact on herps)
- Outline for NE PARC HMG: Partners page, Table of Contents, Introduction, Habitats (Modular, downloadable), Toolkits (management plans, grazing, herbicides, fire control, etc), Resources, Amphibian and Reptile of NE, and Acknowledgement
- How will this work: team effort, need help reviewing, people interested in giving input, working on recommendations
- Time Frame: Draft by winter, and printed document in 10-12 months
- Goal is to have camera-ready copy and distribution to state wildlife agencies, extension offices, land owners, county executives etc.
- Funding for 10,000 copies will cost about \$25,000. Who will be able to help find and secure funding sources?
- Need network for HMG project.

#### Discussion

- A. Haskell: Can have a Coordinator for reviewers and Coordinator for funding
- Q) What is the plan for evaluation of this project?
- E. Stiles: incentive program from government, so this is important tool for land managers to receive these funds and tax breaks.

# Habitat Management Guide Contacts:

SE: John Jensen, john jensen@dnr.state.ga.us 478-994-1438

MW: Bruce Kingsbury, kingsbur@ipfw.edu

NE: Joseph Mitchell, jmitchel@richmond.edu, 804-740-7086

NW: Klaus Richter,

## 2:13pm Break

## 2:27 pm **Meeting Reconvened**

## 2:30 pm More Background for Habitat Management Guidelines (A. Haskell)

- Two parts: Producing a camera-ready product and Publication distribution piece
- Project Leader Assignment
  - 1. NEPARC Involvement for Outline Pre-Draft Reviews: *Al Breisch (States/NGO's), Joan Milam (Industry/Timber)*
  - 2. Funding Publication and Distribution, *Kathy Leo and Bob Zappalorti*

# 2:52 pm Frog Call Quiz (Linda Weir)

- Frog Call Identification Website under development
- Will include frog Call Encyclopedia, Frog Call Quiz (options for state, difficulty, score, and official records for people participating in NAAMP)
- Not ordinary: Database will be driven so that each quiz session can be unique, more sound files will make it a better quiz
- Ideal partnership project: public outreach, education tool, NAAMP training for volunteers
- Need frog call sound files: digital, analogs, will use streaming audio to prevent users from downloading to protect copyrights of files, especially need single species sound files
- Timeline: Sound file acquisition, programming, and testing
- Acknowledgement and credits will be given on website

## 3:04 pm Model: State regulations for Amphibians and Reptiles (Scott Smith)

- History: 1<sup>st</sup> meeting was in Stone Harbor, NJ and committee was created
- Needed some Model Draft Herp regulations (commercial, pet trade, etc)
- National PARC was given the final draft that was adopted with some additions and changes
- NEPARC Model State Regulations and Final Draft of National Model State Regulations were distributed
- Any comments and suggestions, contact Bruce Taubert, National PARC Policy Regulations and Trade Technical Group

# 3:37pm History and discussion on Ban on Snapping Turtle Ban in Maine (Allen Salzberg)

## 3:45pm Break

# 3:59pm **Meeting Reconvened**

# 4:00pm Risk Assessment by Taxa (Chris Raithel)

- Intro for working session tomorrow
- Four posters with risk assessment charts so people can review and give comments
- Comments on physical layout/ format of setup, quality of information, what to do with this info and facilitation of contacts

# 4:04pm **NE PARC Structure** (*Alison Haskell*)

- NEPARC Regional Working Group Structure Issues:
  - 1. Rotate Leadership Role (New Ideas, reduce burnout, new members)
  - 2. Administrative records of meeting minutes and project accomplishments (maintain history)
  - 3. Coordinate meeting, working groups, collaborate with other PARC groups (follow through and communications)
  - 4. Project completion (contact persons and following through)

# - NEPARC Structure (Draft Handout)

### Chairperson

- 1. Representative from different agencies with staggered two-year appointments, elected by NE PARC members at annual meeting
- 2. Responsible for coordinating meetings and agendas
- 3. Functioning as liaison among other PARC working groups
- 4. Facilitating project leaders
- 5. Assuring meeting minutes and representing NE PARC at National PARC

#### Meeting Committee Host

- 1. Coordinate logistics at meeting sites, distributing agenda and registration announcements to NEPARC group
- 2. Audio visual set- up
- 3. Meetings
- 4. Annual meeting held in the Fall
- 3. Location site will vary to provide an equal opportunity for attendance

#### **Project Leaders**

- 1. Projects are action items that are identified by group consensus.
- 2. Timeline will be established and projects leaders will be responsible

#### Webmaster

- 1. Maintains NE PARC website and list serve.
- 2. USGS Patuxent Research Center and Linda Weir is the appointed webmaster

- Decision Making Process
  - 1. Decision should be made by consensus
  - 2. When consensus cannot be made then a group representing all affected areas will be designated by the co-chairs to make a decision

## 4:15 pm Structure Adopted by general Consensus

- 4:20pm Overview of Tomorrow Agenda (A. Haskell)
  - 1. Morning bird walk with Tom Tyning (5:30am)
  - 2. National Amphibian Atlas (*Priya Nanjappa*)
  - 3. Working Groups: Taxa Risk Assessment and Education and Outreach
  - 4. Nominations for Co-Chairs
  - 5. Location for next meeting
- 4:25pm **Announcements** (*Dave Golden*)
- 5:30 pm **Dinner**
- 6:30 pm Raffle We raised \$310 for NE PARC!!!
- 7:00 pm Presentation: Controlling Evasive Plants in Bog Turtle Habitats with Livestock (Jason Tesauro)

#### Wednesday, August 14, 2002

- 5:30 am **Reptile, amphibian and bird walk** (*Tom Tyning*)
- 7:00 am **Breakfast**
- 8:45 am Meeting Convened (A. Haskell)
- 8:47 am **Review Wednesday's Agenda** (Alison Haskell)
- 8:50 am **Announcement** (*Pat Shire*)
- 8:51 am **Habitat Management Guidelines** (*Joe Mitchell*)

Who would like to be peer reviewers? James Beemer, John Behler, Tessa Bickhart, Alvin Breisch, Margaret Carfioli, Bradley Compton, Robert Cook, Raymond Farrell, Alex Figueroa, Dave Golden, Jonnie Gove, Liz Johnson, Robin Jung, Ed Kowalski, Matthew McCort, Dan Mendez, Joan Milam, Holly Niederriter, Christopher Raithel, David Schneider, Ed Thompson, Michael Torocco, Tom Tyning, Chris Urban, Jennifer Wykle, Robert Zappalorti, Joellen Zeh

- Inclusion of the issue of West Nile Virus

- 1. Backlash in Wetlands restoration due to WNV.
- 2. Need info on mosquitoes, perhaps a contact who knows about mosquitoes so that WNV can be addressed in out HMG

# 8:56 am **Amphibian Research and Monitoring Initiative National Atlas Project** (Priya Nanjappa)

- Baseline data assembled at Ball State U. (L. Blackburn, P. Nanjappa, M. Lannoo)
- Acquired by USGS- Patuxent for ARMI
- Expansion and improvement in Progress
- Primary Data Source
  - 1. Peer reviewed journal
  - 2. State and regional atlases
  - 3. Museum
  - 4. State natural history maps
  - 5. Personal communications
- Distribution data needed
- Two Components: Database and Website
- Draft Website Review
- Contact priya nanjappa@usgs.gov
- Future Directions: Expansion of the Atlas dataset and expansion of Atlas Functions
- Available in October

# 9:12 am Introduction of working group projects: Risk Assessment & Education and Outreach

#### Risk Assessment (Robin Jung)

- 1. Ultimate Goal: Document as much info as we possibly can about all the species in the Northeast
- 2. What traits makes each species vulnerable, most risk, which do we need to focus on first
- 3. Split into 4 groups: Squamates, Caudata, Anura, Testudinae
- 4. Questions: Terrestrial Habitat, are they specialized in each habitat, what aquatic habitat, are they specialized in aquatic, fresh or brackish water, hibernacula, urban, buffer zone needed, Life history traits, movement and behavior
- 5. Are we missing important questions in determining risk assessment by taxa?
- 6. Additional comments/concerns: endangered species, low profile animals, scoring index for risk assessment

#### **Education and Outreach** (*Stafford Madison*)

- 1. Brainstorm outreach ideas for the next year or two
- 2. Select a couple of action items
- 3. Work on a plan to accomplish action items

## 9:15 am Assign and break into project working groups (Project Leaders)

## Risk Assessment by Taxa (Chris Raithel and Robin Jung)

Risk Assessment by Taxa Discussion Notes:

- Assess Data Quality
- Which question/ traits most important in accessing vulnerability
- Based on you data and vulnerability assessments which species are most at risk in the Northeast region
- Taxons
  - 1. Squamates
  - 2. Caudata
  - 3. Anura
  - 4. Testudinae

## **Education and Outreach** (Stafford Madison)

**Brainstorming List** 

- NEPARC Directory
- Herps for Dummies (Conservation issues, user friendly, why care, roads suck)
- Local Involvement of High Schools as Research Resources (high school teachers and communities partnerships)
- Issue to reach land owners on herp conservations
- Providing information on herp conservation issues, presentation and printing
- Activist Kit to influence decision makers (e.g. Green Peace in Toxic Wastes)
- Eliminate Snake Prejudice: "Respect Snakes," geared to home owners and landowners, school children, and adults
- Frog Quiz Testers, educators
- Certification Program around NEPARC HMG (golf courses, large land owners)
- Provide environmental education at nature centers
- Products on herp conservation issues to sue at teacher workshops (e.g. Herp for Dummies)

10:45 am	Break
11:00 am	Education working groups reconvened for more discussion
11:45 am	Nomination of Co-chairs: Stafford Madison
11:51am	Unanimous election of Stafford Madison as new Co-chair
11:52 am	<b>Meeting Host Nomination:</b> <i>Kathy Leo</i> in West Virginia (NCRC)

12:00 pm **Lunch** 

# 1:00 pm **Meeting reconvened**

### 1:02 pm **Thank You from PEEC**, Jim Reinhart

- Request for support for funding from State Government
- Faxes and e-mails to State Congress people for financial support

# 1:10 pm Return to Discussion on Next Host Site for meeting

- Initial Site: *Kathy Leo*, West Virginia
- Secondary Site: *Holly Niederriter*, Delaware

# 1:14 pm **Project working groups report back to entire group** (Project Leaders)

## **Education Working Group Report** (S. Madison)

New Projects for Education:

# - Herps for Dummies

Who: S. Madison, Alan Salzberg, Liz Johnson, JoEllen Zeh, Marcy Engleman, Pete Bacinski

What: 2 Parts- 5 pg booklet and a more detailed document, user friendly, accessible writing covering herp conservation issue (why herps are cool, how are herps threatened, why should we care, roads suck)

When: Working draft completed by next meeting

### Tool Kit

Who: Karyn Molines, Danielle Wright

What: Outreach, resources for multiple audiences, web-based, printed

materials (private landowners, educators, and media)

When: This year

How: Determine what produce currently exist (that are effective)

## Risk Assessment by Taxa Group Report

#### **Testudinae**, Holly Niederriter

- New categories for whole family: predation pressure, evasive species, habitat fragmentation
- New categories for individual species: harvesting and collection pressure (human proximity pressure, consumption)
- Total distribution current vs. historic (small range)
- Temperature sex determination
- Most important risk group: collection, sexual maturity, and looking at the big picture, longevity (older produce more eggs than young?)

## Squamates, Matt McCort

- Changes to existing matrix
  - 1. Breeding season  $\rightarrow$  egg laying or birthing
  - 2. Breeding specialist  $\rightarrow$  food specialist
  - 3. Crossing roads? → road kill mortality (how to quantify?)
  - 4. Field incorporating habitat fragmentation on a species
- Addition to matrix
  - 1. Differences in sex vulnerability (i.e. males looking for males)
  - 2. Age specific vulnerability
  - 3. Reproductive status vulnerability
  - 4. Interspecific dependence
  - 5. Collection, ease of collection (fossorial, basking, etc)
  - 6. Role of distribution, how to quantify distribution
  - 7. Survivorship instead of hatchling success rates
- Important topic
  - 1. Age of sexual maturity
  - 2. Reproductive occurrences (annual, biannual?)
  - 3. Home range

## Caudata, Jennifer Wykle

- New Stuff
  - 1. Same habitat codes as the Habitat guidelines
  - 2. Feeding specializations
  - 3. Historical vs. present distribution
  - 4. Distribution (demographics within the region, endemic, disjunct)
  - 5. Metapopulation structure
  - 6. Recruitment vs. % egg survival
  - 7. Anthropogenic pressure (pH tolerance, sensitivity to environment)
- Important
  - 1. Age maturity
  - 2. Aquatic vs. terrestrial
  - 3. Courtship season vs. breeding season
  - 4. Average frequency of egg laying for breeding female
  - 5. Species cross roads/agricultural land combined to modified lands
  - 6. Home range
  - 7. Temperature range for age classes
  - 8. State Heritage Ranking (endangered, threatened, etc.)

#### Anura, Scott Smith

- Missing
  - 1. Potential for exposure to contaminants
  - 2. Food quality, quantity
  - 3. Regional distribution
- Important
  - 1. Habitat: specialist, philopatry, hibernacula

- 2. Movement: home range, max distance move, clustered or scattered breeding
- 3. Life History: max longevity and maturity, breeding periodicity,
- Research Needs
  - 1. Movement data is not available, missing longevity information for many larval species
  - 2. Mountain tree frog, chorus frog, e. narrowmouth toad, carpenter frog, barking tree frog

### Future of this Data, Gideon Lachman

- Put tables into an access file to be used as a relational database, allow queries
- Web based access to this information
- Brad Compton willing to help with turtle information
- Anyone else willing to help? Entering data? Reviewing data? (Names taken)
- Ongoing process as new data is being entered

# 1:50 pm **Identify New Projects** (A. Haskell)

- Ongoing Projects:
  - 1. Habitat Management Guidelines (Joe Mitchell)
  - 2. Taxa Risk Assessment (Robin Jung and Chris Raithel)
  - 3. Web Page/ListServ (*Linda Weir*)
  - 4. NE PARC Directory (*JoEllen Zeh*)
- New Projects: Education/Outreach (see above for more details)
  - 1. Herp for dummies
  - 2. Tool Kit
  - 3. Frog Quiz
- Completed projects: State model Herp regulations

## 1:55 pm DISCUSSION of New Project Ideas

Alvin Breisch: Will NE PARC actively support the ARMI Atlas?

*Priya Nanjappa*: Yes, looking for data, but not sure about official partnership from NEPARC. Links page maybe

Gideon Lachman: A project idea is to identify research priorities within each taxon

*Joe Mitchell*: In regards to partnerships between PARC and industry, it seems like we're thinking about them vs. us. We need to incorporate industry, perhaps education group needs to have workshops, education sessions to involve partners.

Joan Milam: Increased visibility of PARC, activities, meetings should also be another project

*Scott Smith*: Distribution of materials is only the beginning. We need to have training workshops after distribution to engage these working groups. Training workshops for HMG

JoEllen Zeh: We should make a list of people that have presentations, availability of services and resources

Alvin Breisch: That will be part of the NEPARC directory

*Gideon Lachman*: NEPARC should have presentation materials and exhibit information for meetings and conferences

*Joe Mitchell*: We have fliers and brochure available from National PARC. Available at SREL

*Robin Jung*: List on the website, state regulation person for each person for regulatory issues on website, list projects people are doing and contact info.

Scott Smith: Project Idea- Sponsoring research symposium, discussion and meetings (i.e. forest management for herp conservation) Using specialist to work on info to help feed into food modeling chains

*Allen Salzberg*: Fundraising program to help fund students at meetings, bringing students in to help with NEPARC meetings

*Chris Raithel*: Landscape characteristics, arc info analysis of sites and identifying macro preserves for herps

# 2:18 pm **Project participation assignment and voting**

#### **Volunteers for Projects:**

Gideon Lachaman: will help get state contacts for regulations Linda Weir: will enter all the web information Chris Raithel: work on landscape characteristics Allen Salzberg: will work with Fundraising programs

# Voting for other project ideas (2 votes each person)

Sponsored research symposium: 13 votes Inviting specialist to help with risk assessment: 2 votes Identifying research priority: 21 votes

Outreach to partners: 26 votes

Increase visibility: 0 votes (it is incorporated with other items)

Training workshop for HMG: 10 votes

Develop poster displays for NEPARC: 1 vote (these things already exist)

# Winners/ New Projects:

Outreach project leader: Scott Smith and Bob Cook

Identify Research Priority: Bob Zappalorti and Dave Golden

## 2:30 pm Wrap Up/Thank you

# 2:31 pm **Meeting evaluations**

#### What worked:

- listserve worked about getting word out
- Timing was very good, starting and ending in the middle of the day for travel time
- Low cost, inclusive of meals and lodging
- Professional facilitation

# What needs to be changed:

- Mechanisms for people to attend meeting at more remote locations, create carpool networks
- Vegetarian meals
- Poster session
- More effective information distribution; more interaction, less presentation
- Cabins were a bit too hot
- More opportunity for Herping, season appropriate, inviting others to herping experience (networking on outdoor trips)
- Educational Component for others that may have a vested interest, more informational sessions for lay people
- Local herps at meetings for display
- Designated cabins
- Audio equipment and better A/C
- Balance between affordable and comfortable. If going low cost then offer nearby alternatives.

#### 2:45 pm Closing/Meeting Adjourned

(Only if everyone leaves with one soda and an orange)