

Flows in the City: Plastic Grocery Bags

(or, *"My life as H/LDPE"*)

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Intro To Plastic Manufacturing

- Hydrocarbon removal
- Polymer creation
- Resin mixing
- Additives
- Extrusion, injection molding, etc.



(<http://www.superbag.com/manufacturing>)

Distribution

- Global plastic bag market
- Lightweight, compact
- High strength to weight ratio

Choose Your Own Adventure

- You are a plastic grocery bag, recently manufactured in Shanghai. Your destination is Philadelphia, PA.
- Good luck on your travels.
- The Roaming Gnome will be your guide



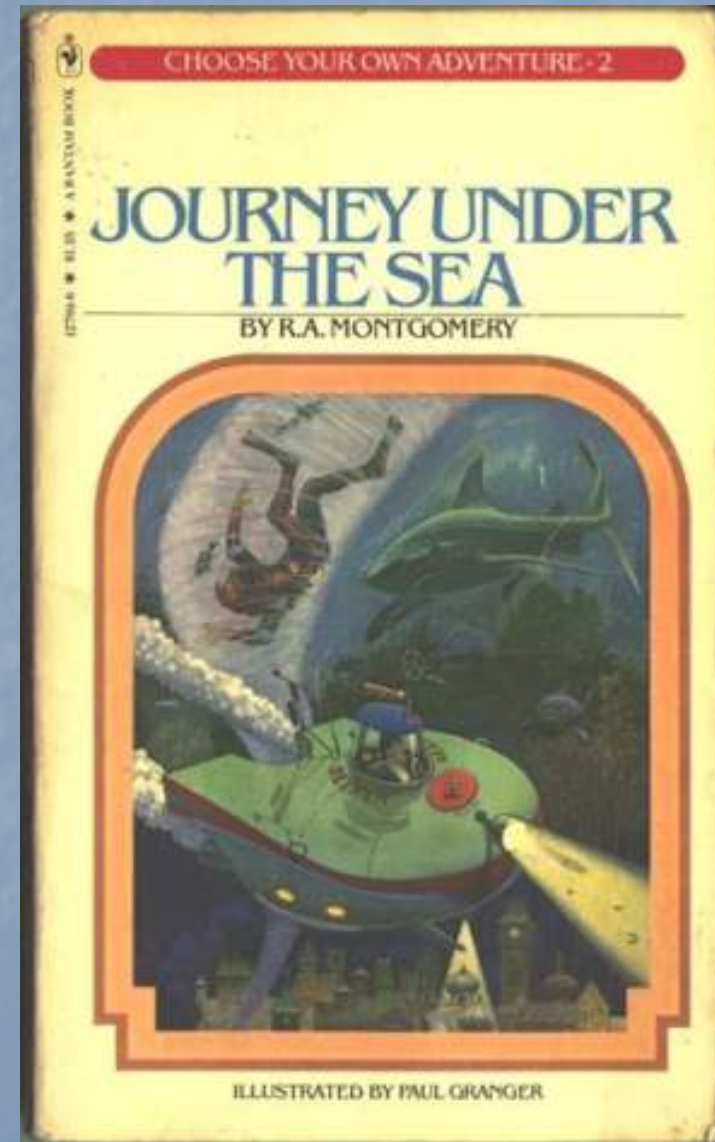
On the High Seas

- Your travel begins on an ocean merchant bound for the US. The captain notices a large storm along the most direct navigational path, but doesn't want to change course.
- Convince the captain to change course
- Trust the captain, "That storm is no match for our seaworthiness!"



Arrgg, The Sea, She is a Dangerous Mistress

- As the waves crash over deck, you and 10,000 of your friends are swept into the abyss.



Plastic Bags- litter of the sea

- Thomas Hayden
- A: 1990 running shoe spill
- B: 2002 garbage spill
- C: 2000 plastic bag spill
- E: Eastern Garbage Patch
- THE END



Safe Arrival

- You are transported from the pier via semi-truck to a grocery store warehouse.
- The next day, you are taken to the store along with the regular produce delivery.

You find the meaning of life

"It is estimated that Americans go through 100 million plastic shopping bags annually and that these bags have captured more than 80 percent of the supermarket and convenience store packaging market."

www.daviscoop.com/grocery_bags.html



•(Nick Tichich, 2005)

After Use

- Your purchaser has emptied your contents, and now stands perplexed as to what to do with you.
- Encourage him to reuse you at the store
- Encourage him to reuse you in another way...



Life is good

- Congratulations! You have helped conserve natural resources, and have saved your user up to 5 cents!
- You are reused for the same purpose you were created.

Back at the Apartment

- You are getting rather ragged, and your owner does not want to reuse you at the checkout, lest the cute girl at the counter think him frugal.
- Encourage him to take you to the grocery recycling bin
- Call it quits and make your way to the garbage



Bag Recycling

- Grocery store recycling bins
- Packaging and transfer back to warehouse
- Further transfer to recycling plants



(Nick Tichich, 2005)

At the recycling plant

- You find yourself at the bottom of a bin of bags, your fate undetermined
- You want to become a new bag
- You seek a higher purpose
- You've heard good things about the trash dumps



Papa's Got a Brand New Bag

- Pacia, an Australian company, recycles large amounts of LDPE and plastic film back into film which can be remanufactured into new bags.
- THE END

Reuse of Recycled Plastic Stock

- Trex Deck, a home deck manufacturer in Wichester, VA, recycles bags and other plastics to form decking panels

(www.trex.com/products/whatistrex.asp).

- Wood plastic composites beams
- Sustainable design and LEED certification
- THE END

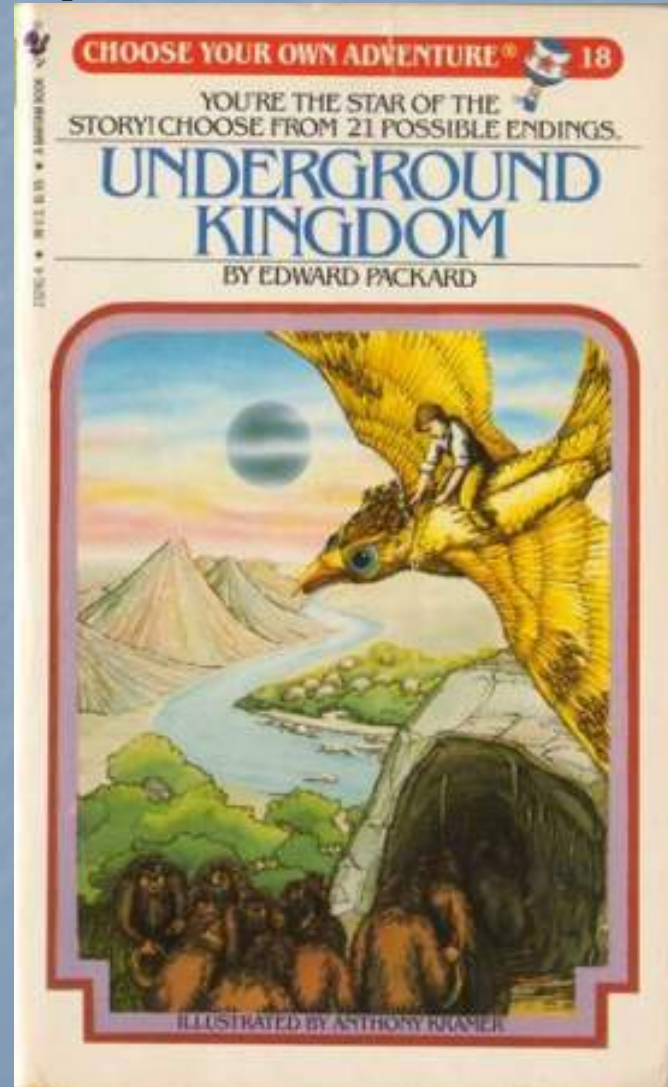
Kicked to the The Curb

- As the sanitation worker picks you off the curb, a gust of wind comes by.
- Play by the rules and stay with the garbage truck
- Take your chances in the wind



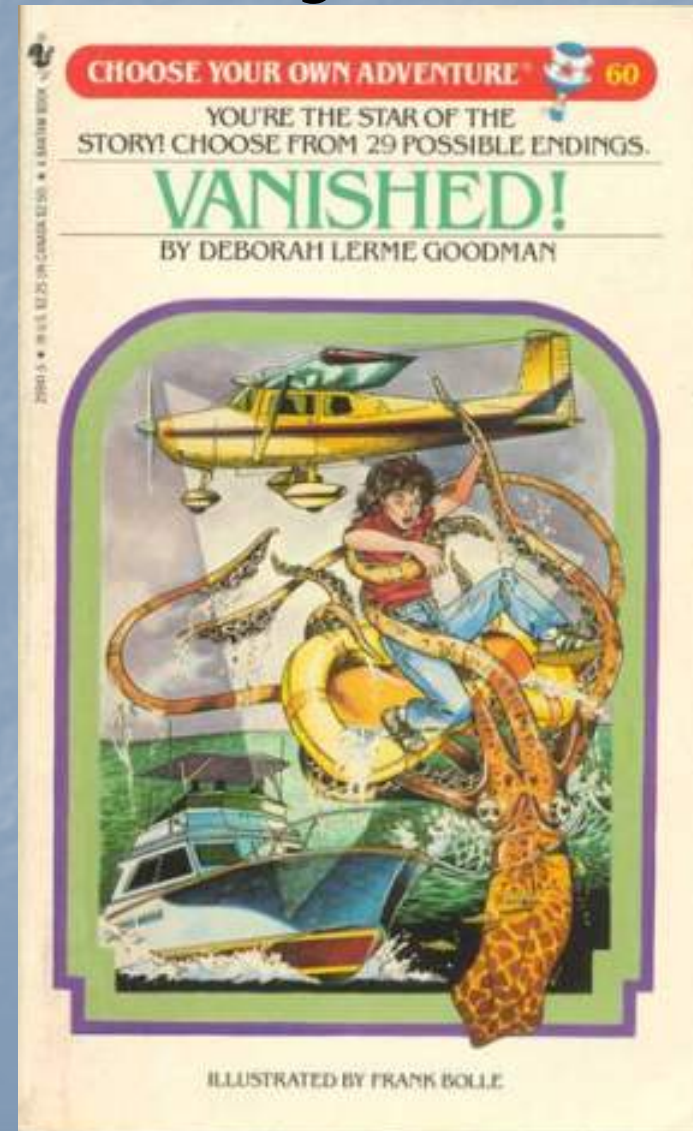
Landfill Disposal

- You will spend the rest of your days under a heap of trash, with only a glimmer of hope of being transformed into leachate
- The End

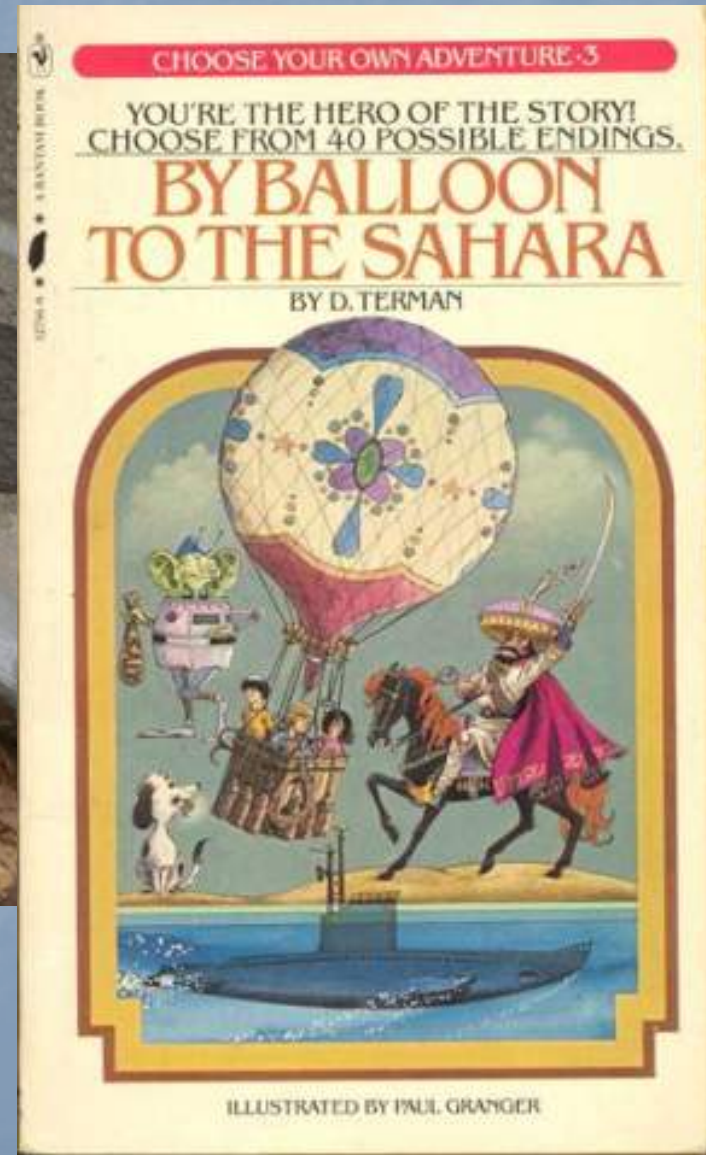


Waste Recovery

- You are reincarnated as electricity and returned to the city
- THE END



Your Life as a Nomad



Clinging on for Dear Life...



Reminiscing on the Good Old Days

- THE END



•(Nick Tichich, 2005)

*" Who must I show?
To bust my flow?
Where must I go?
Who must I know? "*

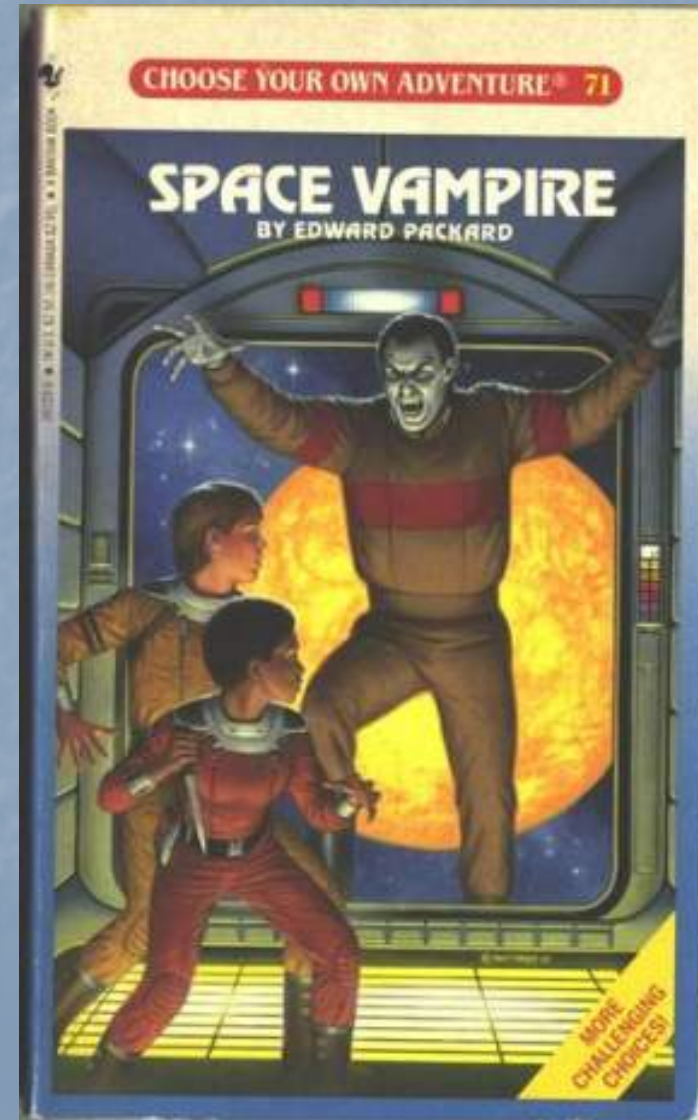
- (Eminem, "8-Mile", 8-Mile Soundtrack)

Unfortunate Demise

You encounter a space vampire on your way to the trash can.

Unbeknownst to you, space vampires are powered by petroleum products rather than blood...

THE END



Unconventional Uses



■ THE END



References

- All "Choose Your Own Adventure" pictures courtesy of <http://www.gamebooks.org/cyoalist.htm>
- American Plastics Council, www.plastics.org/s_plastics, visited 19 Nov 2005.
- Superbag, Inc, www.superbag.com/manufacturing.html, visited 19 Nov 2005.
- Everfaith International (Shanghai) Ltd., <http://everfaith.manufacturer.globalsources.com/si/6008815637098/Homepage.htm>, visited 20 Nov 2005.
- Personal interview, Trader Joe's (Philadelphia) Public Relations, 19 Nov 2005.
- Davis Food Co-Op, www.daviscoop.com/grocery_bags.html, visited 20 Nov 2005.
- Michigan Environmental Education Curriculum, <http://techalive.mtu.edu/meec/module14/Life-CycleAnalysis.htm>, visited 19 Nov 2005.
- Personal interview, Whole Foods (Philadelphia) Public Relations, 17 Nov 2005.
- Worldwatch Institute, <http://www.worldwatch.org/pubs/goodstuff/plasticbags/>, visited 18 Nov 2005.
- Thomas Hayden, "Trashing the Oceans", U.S. News & World Report, 4 Nov 02.
- Pacia Plastics, <http://www.pacia.org.au/index.cfm?menuaction=mem&mmid=008&mid=008.001>, visited 19 Nov 2005.
- Trex Decks, www.trex.com/products/whatistrex.asp, visited 20 Nov 2005.
- Green Building Solutions, http://www.greenbuildingsolutions.org/s_greenbuilding/doc.asp?TRACKID=&CID=524&DID=1734, visited 20 Nov 2005.
- Green Sage Directory, <http://www.greensage.com/06512woodplasticcomposite.html>, visited 21 Nov 2005.
- eSortment, http://tn.essortment.com/crochetrugs_rzje.htm, visited 21 Nov 2005.