



DOT, Harvard, Republic Study Truck Blind Spots

Large refuse trucks are inherently dangerous, especially since they have to drive in congested areas close to pedestrians, bicycles and other vehicles. How can we minimize accidents? Measuring blind spots of different truck cab styles can help. If customers for large trucks are more aware of safer designs, we can specify these designs in the trucks we lease and purchase, so that our drivers will see everyone else on the road better.

The Volpe Center of the US Department of Transportation hosted representatives from Harvard and our trash and recycling contractor, Republic Services, to a meeting this past August to evaluate two common models of refuse trucks used by Republic. According to the DOT's Alex Epstein, a Harvard SEAS Ph.D., the field of vision of the cab-over Mack MRU was 73%, which was 19% bigger and therefore safer than the conventional cab Kenworth T800 at 54%. Based partly on this research, Harvard has specified only cab-over models for its refuse fleet going forward. We still have a long way to go; many European refuse trucks have 98% visibility.

Side guards to protect pedestrians and bicyclists are another truck safety measure spearheaded by the DOT over the past ten years. Harvard Recycling has already installed sideguards on all its trucks to reduce injuries to bikers and pedestrians. Since Harvard followed the leads of the Cities of Boston and Cambridge and re-

quired them of all vendors in 2018, Republic Services and Save That Stuff have attached side guards to all trucks assigned to Harvard. This March, Republic also announced that they will require the guards on all new trucks the Boston area service center purchases. Read more about Harvard's side guards [here](#).

Epstein suggested another safety measure: broadband or “white noise” backup beepers. Studies show that pedestrians and bikers hear source direction better and respect the broadband beepers more than conventional beepers. Harvard Recycling will be installing new the new broadband beepers this summer. Jim Olson, Senior Vice President of Republic Services, promised to install broadband beepers on Harvard trucks soon. For an example of what the improved back-up alert sounds like, watch this [video](#) of a Bobcat.



The Trucking Association of Massachusetts invited Harvard representatives to its annual meeting on May 16, 2019 to report on our side guards and other measures to improve biker and pedestrian safety. David Havelick of the Office for Sustainability and Rob Gogan of Harvard Recycling joined Becca Wolfson of the Boston Cyclists Union to talk about installing and implementing side guards on our fleet so that Harvard and its vendors' trucks can more safely share our campus and city streets, sidewalks and open spaces. With more bikes, pedestrians, Uber and Lyft cars, parcel delivery vans, scooters, and hoverboards on campus, we all need to use every way we can to watch out for each other.

No Bags, No Yuck, No Labware



Starting this past January, all plastic bags were banned from recycling at the Casella Recycling facility in Charlestown, where Harvard's recyclables go. This ban includes bags full of recycling. The bags are hard to separate from other single-stream goods and they jam and tangle up the sorting equipment. See video from Baltimore County Recycling [here](#). If you use bags to collect recycling, please shake out the recyclables into your recycling tote or dumpster and then reuse or discard the bag as trash. If possible, you can recycle your clean plastic film at a local market that recovers them. Somerville Market Basket, for instance, collects bags for pickup by Trex lumber.

Food and beverage residues, also known as “Yuck,” are also grounds for rejection. “If you can tell by looking at the container which food was served in it, you haven't cleaned it well enough.” says Gretchen Carey, Recycling Manager for Republic Services and President of MassRecycle. Scrubbing recyclable ware is unnecessary, but scraping or draining visible residues enables recyclers to market a cleaner product. It also makes the sorting job easier for the workers!

Let us know if you would like laminated versions of the poster shown. We have a limited number to share with Harvard Building Managers and departments. See the City of Cambridge's campaign signs and links to the state's RecycleSmart signs and posters on Page 5. Thanks to the cooperation of Harvard Custodial Services, the student Zero Waste Team, Harvard Dining Services, Cushman and Wakefield, Restaurant Associates and others, Harvard's recycling has only been rejected twice due to plastic bag contamination and once for food residues since January 1. In Calendar 2018, Casella Recycling rejected over 30 loads from Harvard. Let's keep up the improved quality!

Four More Fixit Clinics at Harvard

Allston's Ed Portal (thanks Jason Clark) and the Honan Allston Branch of the Boston Public Library (thanks Carin O'Connor) each ran Fixit Clinics this winter. Cabot Science Library also hosted its second and third Fixit Clinics this year (thanks Amy Van Epps, Susan Berstler and Rob Hart). With the help of volunteer coaches, members of the University community and neighbors repaired dozens of items. Among the fixes were toaster ovens, headphones, public address systems, a coffee grinder, lamps, and two backpacks. The Harvard University Information Technology's IT Summit this May hosted a panel on Fixit Clinics featuring Fixit Clinic Founder Peter Mui, Nathan Proctor of US PIRG's “Right to Repair Campaign,” Rob Gogan of Harvard Recycling, and moderator David Havelick, who spoke on how the University can better keep our goods in useful service and design more repair-friendly contracts with our vendors. Next Fixit Clinics are at the Allston Ed Portal late this summer and at the Cabot Science Library in October. So don't discard that funky fan, buttonless blouse or troubled toy. We will show you how to fix it! Coaches bring tools, hardware and know-how to enable all of you to become makers and re-makers. Learn and teach how to fix things, reduce waste, make friends and have fun.



Allston Ed Portal Fixit Clinic Coaches (L to R): Kendall Chun, Rob Gogan, Mary McLaughlin, Ruth Nan, Stuart Cody, Anil Tarachandani, Joe Wooters, Jerusha Achterberg, Peter Mui, Brian Saper, Dong Ling, Gianna Bird, and Doris Sperber. If you are interested in becoming a coach or learning more about Fixit Clinics, please contact us!

Driver Keeps CDL Thanks to HLS Program



Harvard Recycling and Waste Services hired Darwin Galdamez-Flores in August 2017. He turned out to be an excellent driver, picking up trash, recycling, and bulk recyclables from all campuses of the University. Darwin policed his routes thoroughly, working alone through the weekends. The department was happy with Darwin and he enjoyed his job. But the El Salvador native has DACA status, which presented a complication when Darwin went to renew his Commercial Driver's License (CDL) in October 2018. The CDL is required for driving the large compactor trucks we use. The Massachusetts Registry of Motor Vehicles told him that his immigration status prevented him from renewing his CDL, and they confiscated his license. The Registry gave him a renewed Class D license, allowing Darwin to drive cars, but not our recycling trucks, which weigh over 26,000 pounds. We wanted to keep Darwin, but without the CDL, he couldn't legally drive our trucks. We faced the sad prospect of having to let him go.

At the suggestion of Kristina McCarthy, Associate Director of Human Resources for Campus Services, we contacted the Harvard Immigration and Refugee Clinical Program of Harvard Law School. Led by Staff Attorney Jason Corral, the HIRCP took Darwin back to the Registry and asked them to reconsider Darwin's application. It was their firm belief that the Registry had made an error by confusing the terms "Lawful Permanent Resident" and "Lawful Permanent Presence." While Darwin was not in the former category, being DACA gave him the latter status. Again the Registry refused, insisting that Darwin did not qualify for a CDL. HIRCP appealed the decision and took Darwin to the RMV's Magistrate Court of Appeals. Finally, after weeks of effort, the Court decided that Darwin was in fact qualified to receive a CDL. The HIRCP's action not only saved Darwin's career, it enabled many other DACA drivers to renew their CDL's too.

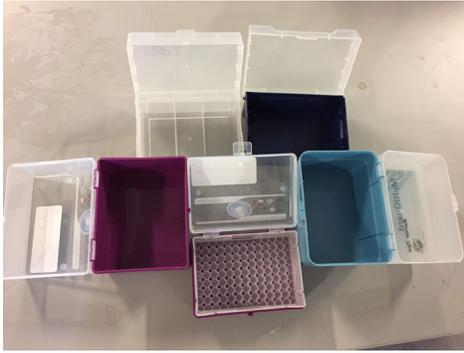
Harvard Recycling is extremely happy to have Darwin back as a fully-legal CDL driver. We look forward to having him drive for us for many years to come. We send our sincere thanks to Attorney Jason Corral and Paralegal Nilce Maldonado of HIRCP; Wayne Carbone of Facilities Maintenance Operations; Kerry Bierne, and Kristina McCarthy of Campus Services for their help. Without their support, we doubt whether Darwin would have been able to reclaim his CDL.

MARK EVANS of Casella Recycling shows clean finished bales of recyclables to members of the Harvard community on December 2018 tour of Casella's Charlestown plant. We toured Save That Stuff's sorting facility and saw the Waste Management CORE facility, also in Charlestown, where Harvard's organics get pulped for shipment to the Greater Lawrence Sanitary District. This fall, we plan to visit GLSD. Please let us know if you are interested in taking our free tours of local recycling and organics processing sites.



DO YOU NEED SMALL PLASTIC STORAGE BOXES?

At the Harvard Surplus Warehouse, we get over 100 clean, lidded pipette tip boxes per week from Harvard labs that used to be able to go off campus with single-stream recycling. We now have to reuse or recycle these as poly-propylene. This is a marketable resin of plastic, but we don't have the space to accumulate enough to make it worth a recycler's while to pick it up. We are exploring a couple of densification



methods, but we would rather see the boxes recovered for re-use as is. Most are in the 3" x 4 1/2" x 2 1/2 inch range. Happy Surplus Shoppers have taken the boxes for these and other reasons:

- Sorting and storage of small hardware, sewing supplies, etc.
- Fruit fly traps
- Travel soap dishes
- Fishing fly lure storage



**HARVARD HABITAT
FOR HUMANITY**



eliminating racism
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Help charities at Harvard Senior Move-out

Friday, 5-31-19 is Harvard Senior Move-out Day. Over the past 26 years, Harvard Recycling has partnered with a variety of charities to recover students' leftover books, furniture, clothing, supplies and equipment. The Harvard Habitat for Humanity Move-in "Stuff Sale" broke \$1 million in revenues this past fall. HHH supplies 8-10 volunteers during Move-out and over the summer to clean the mini-fridges, vacuum the rugs, sort and classify and re-sell the goods to entering and returning students at Move-in.

In May 2018, Furnishing Hope of Massachusetts supplied five volunteers to help pick up the tidal wave of reusable goods that came out of Mather House on Senior Move-out Day. This year, FHM is expanding to do both Mather and Dunster Houses. Another group, Vision-Organisation pour le développement social en Haïti, will be receiving donations and organizing goods at Leverett House. Please let us know if you have a group of volunteers that could come on 5-31-19 to collect goods to benefit your organization. We will have several tons (literally) of clothing, pots, pans, dishware, beds, mattresses, non-perishable food, pillows, blankets, comforters, sports equipment, crutches, and room décor of all kinds. Every vanload your group picks up is one less ton Harvard Recycling will have to pick up that day, and makes less likely the possibility that some goods will be lost to the landfill in the scramble. Please contact us if you have a crew that is available!

We are also taking volunteers not affiliated with any group to help us collect the goods (books, appliances, fans, small tables etc) for HHH's Stuff Sale. Thanks for your help!

PBHA “Day of Service” Warms Homeless

Shortly after Move-in this year, thirty first year students participating in the Phillips Brooks House’s Day of Service met at the Harvard Surplus warehouse in Allston to glean through the clothing donated to the Habitat for Humanity Stuff Sale at last year’s Move-out. The freshmen consolidated and bagged blankets, winter coats, sleeping bags and other goods to help those who live on the cold streets of Boston and Cambridge throughout the winter. Michele and Rocco Mastropieri of Air People Care, a non-profit which aims to help the homeless, picked up over 100 bags for their clients. Thanks to PBHA, Air People Care, and Brandon Geller of the Office for Sustainability for helping us participate in this project.



City, State Push New Rules

Ever since August 2017, when China’s “National Sword” program forced recyclers there to reject North American recyclables containing over 0.3% contamination, the Massachusetts DEP has partnered with recycling companies and municipalities to spread consistent messages about recycling specifications. Labels and posters are available [here](#). At left, Cambridge Recycling Program Manager Meryl Brott shows City’s “Recycle Right” poster at Harvard’s SEAS Hubway Station last fall. The most important messages for Harvard buildings are:



RECYCLE: Bottles, cans, boxes, papers, and lidded plastic food, beverage, cleaning and health care jugs and tubs.

TRASH: Plastic bags, food scraps, liquids, lab ware, and everything else not reusable, compostable, or recyclable with special programs.

Refuge made of Refuse

Students from Harvard Graduate School of Design used surplus furniture from Harvard buildings to construct a public art display exploring the concept of “Home” this fall. Visiting Lecturer and former Loeb Fellow James Shen brought his students to the Harvard Surplus warehouse for the construction. Delivered to the porch of Gund Hall on Quincy Street, the construction placed familiar desks, chairs, shoes, media equipment and computers in unusual orientations to offer comfort and refuge on the busy sidewalk.



Peter Mui's "Fixit Clinic" Questions for Harvard University



PETER MUI (L), Founder of Fixit Clinic, fanning the flames of consumer empowerment and techno-literacy, at Cabot Science Library Fixit Clinic at Harvard in February, 2018. Peter has flown from California to Harvard on three occasions to help establish and promote a culture of repair, both in the University's operations and in its engineering and design programs.

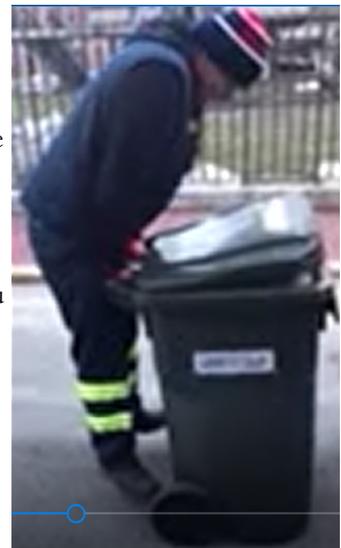
- How do we set up Harvard for repair and reuse?
- How can we best share community assets, and keep them all at the highest utility possible?
- How do we best maintain lab and research equipment, including at Harvard teaching hospitals?
- How do we repair facilities infrastructure, e.g, police radios, pop up tents, canopies?
- How can Fixit Clinic help to inform the development of a practice of design for durability, serviceability, and repairability, alongside teaching Design for Manufacturing (DfM) and User-centric Design?
- How best to expand opportunities for collaboration to promote above values among the School of Engineering and Applied Science and the in the existing design practices at Harvard Graduate School of Design and other faculties?
- As we transition to a world with digital-informed fabrication that tends towards a future with more and more mass customization and manufacturing on demand, is it

possible for Harvard to play a role for manufactured goods to be designed, built, serviced, and maintained in a local service area using locally available tools materials processes and services?

- Is it possible for Harvard's SEAS to be a forerunner in the emerging world of mass customization and manufacturing on demand, where products are no longer manufactured in overseas factories in mass quantities?
- Can Harvard use its purchasing power to nudge its vendors towards durability, sustainability and demanufacturability from its vendors? For example, can Harvard demand access to repair manuals and diagnostic software which up to this point manufacturers have been unwilling to share?
- Could lab equipment and scientific equipment manufacturers also be held to the same kind of standard?
- Can Harvard set up an institution-wide interdepartmental asset sharing system to implement a "virtual" Library loan system for sharing things -- but without having to have a central storage repository, using asset tracking software so that another department or another laboratory could use equipment occasionally? This could also be an opportunity for greater cross-academic cooperation.

Over-full compost totes hazardous

Please keep compost totes to a manageable weight. The photo at right shows Save That Stuff's driver Beckenbauer De Oliveira, AKA "BB" putting his full weight onto the back of an extremely overloaded tote, probably over 100 pounds. The excessive weight is hard on the driver and leads to dumped totes. In addition, overloading causes cracks and leaks in the compost tote. If you are loading wet food scraps into a tote, please fill it no more than half way, or lighten the load with some less-dense organics such as bread products, serviceware, or napkins.



SURPLUS AVAILABLE: We have an ever-changing inventory of furniture, supplies and equipment from many buildings across the University. We distribute an average of five tons of goods per week. Come down any Thursday from 11-2 to see what we have available. Harvard departments and non-profit organizations can come get first dibs on Mondays from 11-2 (including Memorial Day). **Please note that we will be closed Thursday, 5-30-19, Harvard Commencement Day, July 4th, and Thanksgiving Day.** Goods are available at our Recycling and Surplus Center in Allston on all other Thursdays at 156 Western Avenue from 11 AM – 2 PM. We are open until 2 PM but for best selection you need to come at or shortly before 11 AM, but not before 10 AM. At that time you may sign up for an appointment to “shop” in the warehouse. Harvard departments and non-profits may come on Mondays from 11-2. If donating furniture, please instruct your movers to contact us 24 hours before delivery < rob_gogan@harvard.edu > so that we can receive and display everything safely. We can take material only from Harvard buildings which use FMO Recycling & Waste Services, and we can never receive any trash or hazardous waste. Movers must unload items one at a time so we can photograph and inventory the goods. All loose items must be placed on shelves or in hampers available here. When donating file cabinets and desks, please unlock, open up and clean out all drawers. We cannot receive any furniture with unknown contents. Likewise, please make sure all computers, smart phones and other electronic devices are purged of any confidential information. Harvard Recycling does not shred or otherwise destroy any confidential materials we pick up or that are delivered to the recycling and surplus center. Thus it is the responsibility of the donor or recycler to make proper arrangements to protect confidential information. Please call us if you need extra recycling barrels or more pickups when cleaning out offices and furniture. Also, please ask us for contact information for confidential destruction vendors serving the campus. Our preferred vendor is DataShredder at 1-800-622-1808. Please keep in mind that parking space limitations force us to be **STRICT ABOUT PARKING RULES.** Please respect our neighbors' need to maintain safe traffic flow around the Recycling and Surplus Center. When here for Thursday's Surplus Distribution, follow the parking monitor's direction and park only in designated areas. You may also park in the free spaces in the streets adjacent to the property. If you are interested in seeing any of the items now available, come to our Recycling and Surplus Center at 156 Western Avenue, Allston. For directions, see map and text on next page. We may be able to deliver goods to Harvard departments for a small fee.

DIRECTIONS to HARVARD SURPLUS DISTRIBUTION

By the "T" then walk-- For GPS directions use “156 Western Avenue, Allston.” Take the Red Line to "Harvard" station up double escalators to main exit. Walk south on JFK Street across Charles River, where road becomes N. Harvard Street. Walk past Harvard Stadium on right to first traffic light at Western Avenue. Turn left (east) onto Western, then walk 0.1 miles past Flint Cleaners and Swiss Bakers. Just after the SwissBaker parking area is the driveway to 28 Travis.

By the “T” then bus: Leave Harvard Station by "Church Street" exit. Walk north one block on Massachusetts Avenue (opposite traffic flow) across Garden Street to Dawes Island bus stop. Take either Bus 66 or Bus 86 and tell driver you want to get off at Western Avenue in Allston. Sit on right side of bus and look for Harvard Stadium on right. Get off bus, turn left (east) onto Western, then walk 0.1 miles past Flint Cleaners and Swiss Bakers. Just after the SwissBaker parking area is the driveway to 28 Travis.

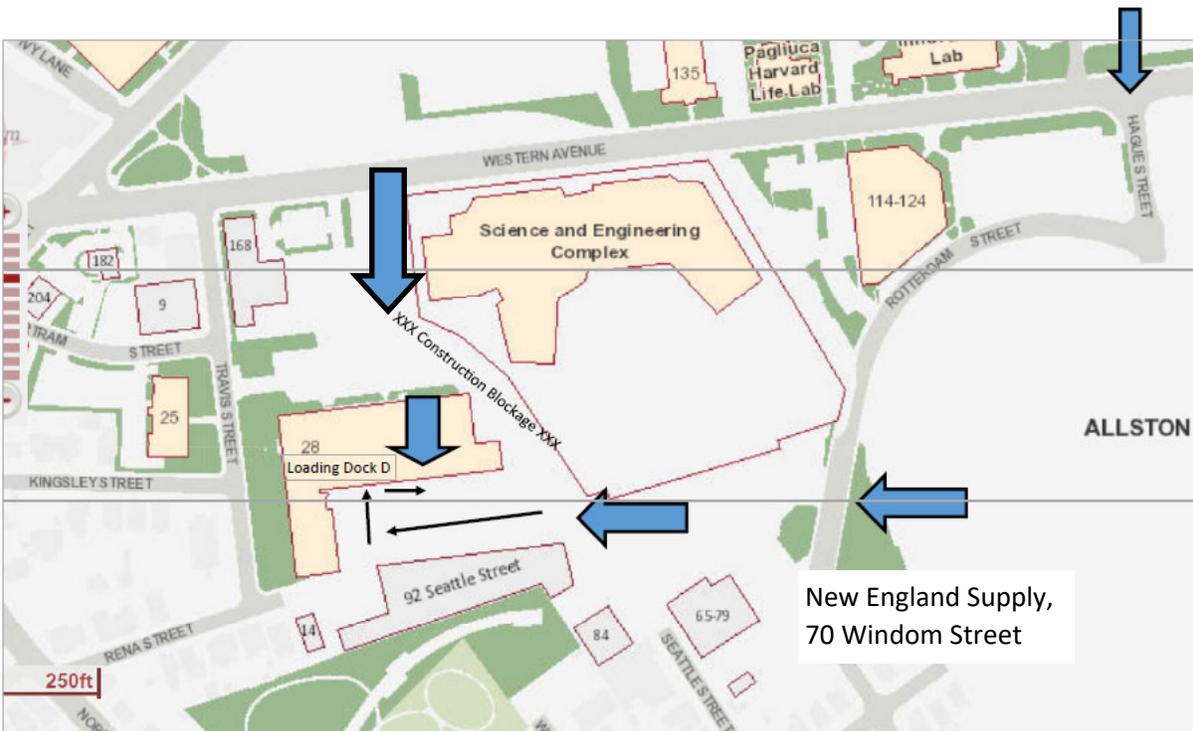
By car from south or west of Boston: For GPS directions use “156 Western Avenue, Allston.” From I-90: take I-90 east (Mass. Pike) to exit 18, "Allston - Cambridge." Bear left after toll booth towards Allston, onto Cambridge Street. Take Cambridge Street to second light approx. one quarter mile to gas station on right. Go right just past gas station onto North Harvard Street. Take North Harvard Street one quarter mile to traffic light at intersection with Western Avenue. Turn right (east) onto Western, then go one tenth of a mile past Flint Cleaners and Swiss Bakers. Just after the SwissBakers parking area is the driveway to 28 Travis. Park in one of the striped spots. From I-93: take I-93 to Charles Circle (Cambridge/Somerville exit). Get onto Storrow Drive westbound 3 miles. Look for "Allston/Harvard Square" exit. Go right up ramp to

(DIRECTIONS TO HARVARD SURPLUS BY CAR, continued)

North Harvard Street and then go 0.1 miles past Flint Cleaners and Swiss Bakers. Just after the SwissBakers parking area is the driveway to 28 Travis on the right. Park in one of the striped spots.

By car from from Route 2/ Soldiers Field Road: get onto Soldiers Field Road. Go past athletic fields to exit sign: "Allston/ Harvard Square." Take right at top of ramp onto North Harvard Street. Go 0.4 miles, past Stadium, to first traffic light. Turn left (east) onto Western Avenue, then go 0.1 miles past Flint Cleaners and Swiss Bakers. Just after the SwissBaker parking area is the driveway to 28 Travis on the right. Park in one of the striped spots.

All delivery trucks: For GPS directions use "114 Western Avenue, Allston." Follow above directions for "By Car." Go to intersection of Western Avenue and N. Harvard Street, Allston and turn EAST on Western Avenue. Go .3 mi and turn RIGHT at the light onto Hague Street opposite Harvard Business School. Bear RIGHT at dead end onto Rotterdam Street, which becomes Windom Street. Go 0.3 miles to driveway to 28 Travis just before New England Supply. Follow signs past wooden fences to large white building. Go to Loading Dock D (first on right), Harvard Recycling and Surplus.



HARVARD SURPLUS DISTRIBUTION: Access is at 156 Western Avenue between SwissBaker driveway and the School of Engineering and Applied Science construction site. To get to Loading Dock D at the back of the Recycling & Surplus Warehouse, go EAST on Western Avenue, then RIGHT / SOUTH at the traffic light onto Hague Street, bear RIGHT onto Rotterdam Street, which becomes Windom Street, then right onto East Driveway just before New England Supply at 70 Windom Street. Follow traffic flow around parked buses to get to Dock D. Please obey all stop signs and any traffic detail instructions. Thank you for your cooperation!



Thanks for reducing, reusing, re-building, repairing, refurbishing, refinishing, re-selling, recycling and composting! The Harvard Recycling Team (L to R): Ed Betten-court, Dave Costa, Nelson Medei-ros, Darwin Flores-Galdamez, Kieran Clyne and Rob Gogan. Not pictured: Julio Tejada

CAMPUS NATURE WATCH: Highlights from 2018-19

Summer: GARTER SNAKE hides among the grass in front of Gordon McKay on Oxford Street on a warm summer night.

Fall: Spiral-shaped HONEY LOCUST SEED PODS corkscrew along JFK Park next to Kennedy School of Government in front of bicyclist on gusty fall morning.

Rain-swollen Charles currents curl and tumble lazily around rocks and roots at bank by Lyman Bridge. Small fish breaks water at silty surface beside ripe apple flooding by from upstream tree.

At least 200 CANADA GEESE graze on Ohiri Field as full Beaver Moon rises above Morgan Hall cupola.

Winter: As dawn light obscures Jupiter and the Scorpion overhead, male CARDINAL chirps to mark his territory atop RIVER BIRCH tree across the quad from Andover Hall.

ROSE-BREADED MERGANSERS dive and emerge repeatedly, confidently swimming and popping up like corks on the choppy Charles.

BELTED KINGFISHER perches atop storm water outfall rail west of Larz Anderson Bridge.

Spring: Two DOWNY WOODPECKERS forage together in a tall tree facing Widener's front steps and also call to each other.

"The natural world is shifting, which means we need to hurry to fix what's broken and pay close attention to what's coming next. The wild must come first if we are serious about safeguarding a future to hand over to our children and our children's children. When we put wild systems first, we are passing on the gift of life to many species, including our own." --Susan Hand Shetterly, "Seaweed Chronicles: a World at the Water's Edge, 2018

Thanks to Campus Nature Watchers Aryt Aresti and Sonia Ketchian!

Below: RED-TAILED HAWK pauses before dining on fresh rodent meal in First Parish burial grounds.





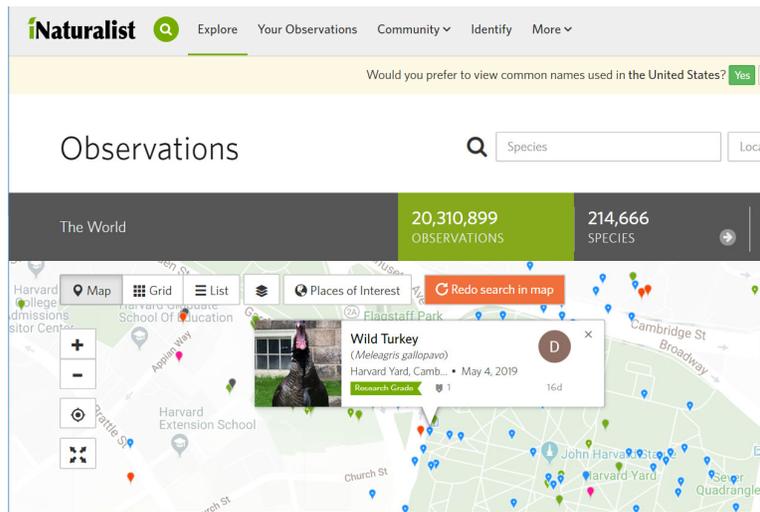
Fungi and COMMON SHIELD LICHEN adorn trunk of cherry tree near 175 N. Harvard Street in Allston.

FAVORITE CAMPUS NATURE WATCHING SPOTS: The banks of the Charles abutting the Weeks Footbridge (east side, where it's shaded) and the Larz Anderson Bridge (west side, where there are stones to sit on that are usually shaded). In May, the Charles hosts the run of countless alewives swimming upstream to spawn, accompanied by black crowned night herons, great blue herons, double-crested cormorants, ospreys and other predators. Large turtles, two-foot-long carp, common mergansers, buff-head ducks, muskrats, Norway rats and Canada geese swim by these vantage spots. Of course, in season, there is also the swift passage of rowing shells, the cries of their coxswains and coaches counting out strokes, boatloads of recreational flycasters, passing tourboats from Cambridgeside Galleria, and on a special day in May, the shrieks and splash-es of daredevil students celebrating Commencement by jumping off the Weeks for a quick swim in the iron-brown but officially "Safe-for-swimming" waters of the Charles (<https://www.crwa.org/field-science/monthly-monitoring/water-quality-data#interpret-data>).



"WILD" TURKEY stands tall on granite posts near Barker Center, pecking at low-hanging leaves.

Right: Yardlings take advantage of early wet snow to roll up hundreds of WHITE OAK autumn leaves into a 5' snowball.



Above: iNATURALIST TRACKS HARVARD WILDLIFE at www.inaturalist.org. If you are interested in becoming a Harvard Nature Watcher, email us and we will show you how to start charting the wildlife around your building. Also, it's not too early to think about a Harvard Bio-Blitz! Tentative date is Saturday, May 2, 2020. Let us know if you are in!