

Small Bird Enrichment Strategies: a DIY Approach to the Tiniest Care

By Sara Cummings

For the last almost three years, I've been the guardian to Lady Joanna Banana, an extremely small and incredibly spicy American yellow parrotlet. Joanna is my first and only bird, and despite extensive research beforehand, I truly had no real idea what I was getting into.

I was immediately inundated with just how much (and how little) information was out there on small bird care. Any advice I found in one place was contradicted somewhere else, and it was difficult to find the throughline of truth. **Most of the good advice I did end up find was for birds much, much larger than her,** and would need to be adapted.

So as an engineer and maker by trade, I started to take a very DIY approach to her care. Most of these solutions can be made from repurposing household items, but I'll also include amazon links to everything here that I've ordered or purchased for these DIYs.

This pamphlet will be the first in a series of three to be published in the following weeks that will cover specific strategies surrounding enclosures, enrichment, diet, and training for tiny birds, written by me, and verified by Pam.

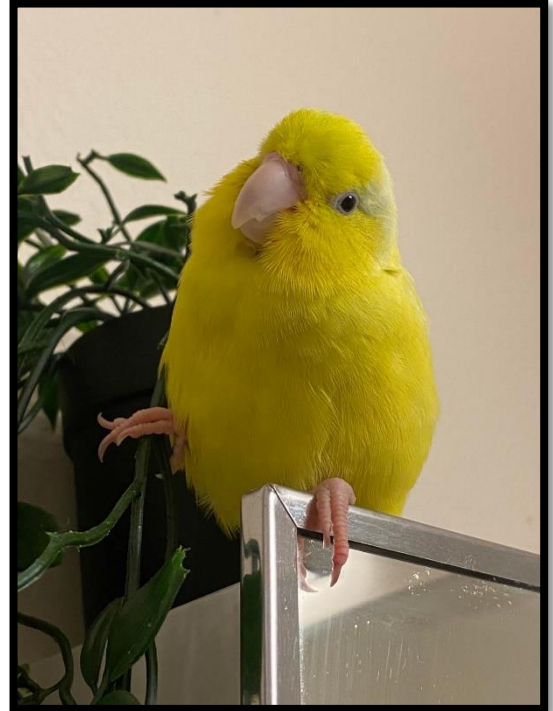


Figure 1: the Little Lady

1. DIY Enclosure Hacks: Adapting big pet products for little birds
2. Perches as Home Décor: Hacks for the Modern Bird-Friendly Home

Some of these hacks are pretty straightforward, but others do require a higher level of technical skill. Before introducing each hack I'll specify the difficulty and the total project cost, as well as provide links to where you can buy the supplies to make them yourselves!

If you have any additional questions, feel free to reach out via email or my socials, I'd be happy to help! This is my first prevue into written parrot content, but I do also run a business drawing custom parrot portraits, so you can find me on Facebook and Instagram.

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- Instagram: @carltoncrafts (Art) and @ilookatfish (Joanna's Instagram)
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Let's get started with Chapter 1!

Chapter 1: DIY Enclosure Hacks

Adapting Big Pet Products for Little Birds

When it comes to enclosures, much of what is sold online is either inappropriate for small birds due to the overall size of the cage or the bar spacing (anything larger than around 10mm between bars should not be considered). **Furthermore, many enclosures that are designed for other pets or bigger birds can be a great fit for your tiny bird with some slight adaptation** and are often much cheaper.

In this section I will go over 3 different enclosure hacks that Joanna regularly uses, the project difficulty, and total cost to complete:

1. Creating a cage mid-level out of a cooling rack
 2. Repurposing a cat backpack for small birds
 3. Building a sliding window aviary out of a recycled cage
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Hack 1.1: Creating a Cage Mid- Level out of a Cooling Rack

Project difficulty: Beginner

Total project cost: Under \$25

After ordering Joanna's main cage, I realized it was unnecessarily large. **Though I covered the whole cage with toys at first, I found that she was only using the top half.**

So, to make her feel safer and provide a surface for placing food and foraging bowls, I **zip tied a thrifted cooling rack to the top half of the cage to create a partial shelf.**

Though she occasionally goes to the bottom half of her cage to forage, this makes her enclosure far more suitable for a bird of her size.

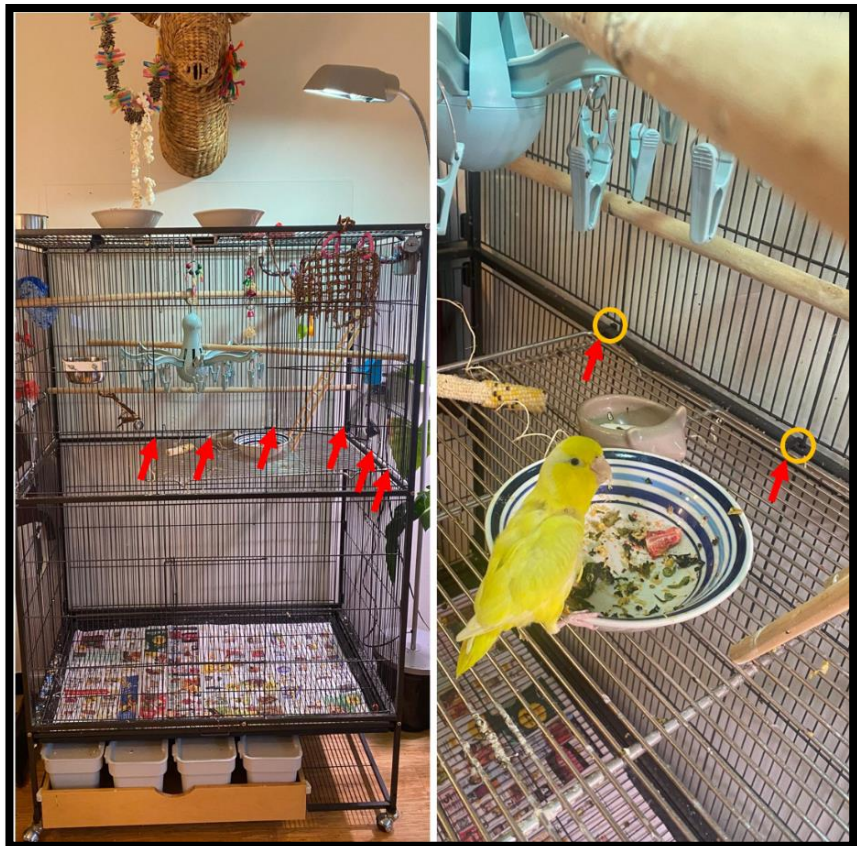


Figure 2: Cooling Rack Mid-level

When choosing a cooling rack, ensure it is:

- Stainless steel,
- Has bar width of less than 10 mm,
- Is attached to the cage with at least 3 zip ties per side (indicated in Figure 3 by red arrows)
- Does not cover the full width of your cage.

I thrifted mine for under \$10, but there are cheap options available new as well.

Hack 1.1 links:

- [Prevue Hendryx F50 Wrought Iron Flight Cage](#)
 - [Set of 2 stainless steel cooling racks](#) (under \$20)
 - [Small zip ties](#) (\$5)
-

Hack 1.2: Birdie Adventure Backpack (with optional stroller)

Project difficulty: Easy

Total Project Cost: Approx \$90 new, though backpack and stroller easily found second hand.

Joanna LOVES her Adventure backpack. Though I don't use it for air or car travel (I'll get into that in a later article) **this is perfect for short flock adventures to go outside and see the world.** She loves sitting in the sunshine and going to new places. Just be prepared to get a couple of stares from curious strangers.



Figure 3: Birdie Adventure Backpack

As you can probably imagine, this was not designed with parrotlets in mind, rather cats. **But there are a couple aspects of this backpack that make it ideal for small birds:**

- Small zipper entrance on the side for putting in food, treats without opening the whole carrier.
- Air holes are too small for her head to fit through (she's tried) but are the perfect size for perch attachments.
- Stiff cloth liner can be removed and washed.
- The back of the backpack expands to give maximum play space.

Though it was pretty much perfect to begin with, I customized this backpack by attaching rope perches between the air holes. I found this worked much better than solid perches, since the sides of the backpack aren't firm enough to support anything too heavy. I also found providing her with a path from the bottom page up to the rope (as seen in the upper left photo of Figure 3) made this setup much easier for her to use. **Though I bought mine new, I see these backpacks show up ALL THE TIME while thrifting in near new condition for under \$10 (presumably because the cat didn't like them).** Check FB marketplace first.

I use the stroller because it reduces jostling over carrying her on my back. She also gets nervous when I wear this as a backpack since she can't see me, so I find either carrying it at my side or in the stroller works best. Again, thrift this if you can these are common finds second hand.



Figure 4: Backpack in Expanded State

Hack 1.2 links:

- [Cat backpack](#) (\$40)
- [Bendable Rope Perch](#) (\$6)
- [Cosco Umbrella Stroller](#) (\$35)

Hack 1.3: Sliding Window Aviary from a Recycled Cage

Project Difficulty: For advanced makers

Project Cost: Around \$200

Unlike the previous hacks I won't be able to provide a neat instruction guide, but I can discuss the most important parts and pitfalls of this build so that, for the right maker, this is something that can be replicated. The finished build took about 2 weekends of work.

Despite not being beginner friendly, this aviary is very renter friendly. The cage is held up against the window with tension alone and can be easily removed without any damage. I can open and close the sliding interior window while the aviary is in place, opening it when the weather is nice and closing it on colder days.



Figure 5: Joanna Enjoying her Aviary

As you can see in Figure 6, this aviary is made up of 4 key elements:

1. The base
2. The partial window screen
3. The cage
4. The top gap blocker

It's very important that every piece is aligned with precision, to prevent any gaps that either might allow your bird to escape or are wide enough for them to get their head stuck in.

All original doors of the cage are zip tied closed, so they cannot be accessed from the outside and opened by a curious animal (Seattle crows are smart).

I'll walk through building these 4 elements one at a time and walk through the most important things to pay attention to and think about when customizing for your own scenario.

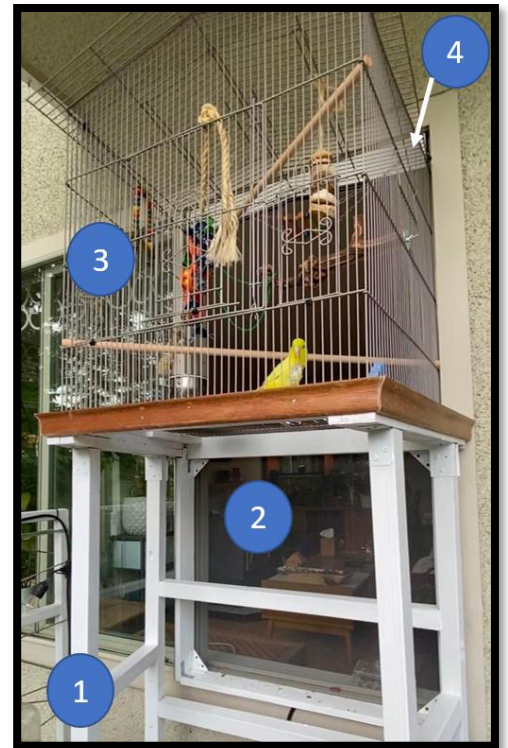


Figure 6: Labeled Aviary



Figure 7: Cage adapted to fit window width.

Step 1: The Cage

This project started when I noticed that the width of Joanna's old cage was just about the width of the window. To make it an exact fit, I removed the back, and flared the sides of the cage out slightly to the edge of the roof overhang, and zip tied it in place. This step is unnecessary if your cage is the right width!

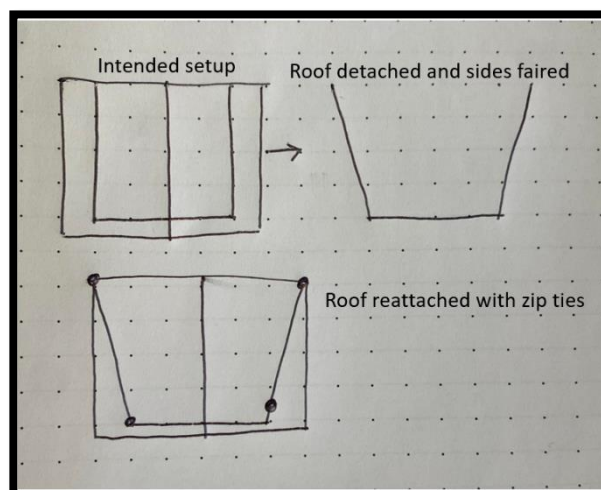


Figure 8: Top view of Adapted Cage



Figure 9: Frame Construction Process

I constructed the base of this frame out of 3 stacked layers of 1"x3" furring strip board secured with wood screws and glue.

The legs and cross supports of the base were made of 2"x2" mixed grain common boards. All wood was purchased at Home Depot and made up the bulk of this project expense.

It is CRUTIALLY important that the base sit exactly flush against your window. This is very hard to get right because your ground (or in this case your deck) is rarely or never exactly flat. Any gaps are extremely dangerous for your bird!

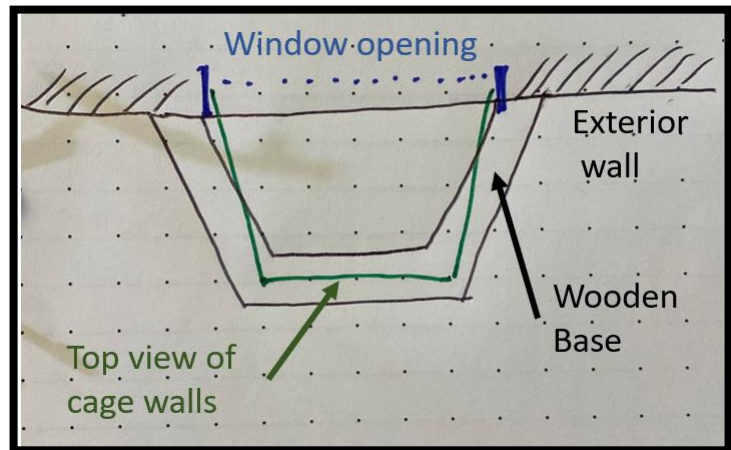


Figure 10: Top view of frame-to-window fit



Figure 11: Leveling Furniture Feet

To accommodate for the angle of my dec, after cutting the base legs to approximately the correct length, I installed furniture leveling feet onto the bottom of the frame. To install them, I first had to drill 1/2" holes with an auger drill bit into the bases of the legs.

These levelers allowed me to get a perfect fit between the wooden base and the window frame, ensuring safety for Joanna while not actually attaching the stand to my exterior wall.

Step 2: The Base

Next, I traced the perimeter of the altered cage onto some paper bags, and constructed an approximately matching wooden frame for it to sit on.

This frame needs:

- To be slightly wider than the width of the window to support itself against the exterior wall and
- Elevated enough to bring the top of the cage into contact with the top of the window.

Here you can see what these finished feet look like installed in Figure 12.

Finally, I added enough horizontal support to my frame so the legs wouldn't be wobbly and would hold their shape well. I put 2 additional supports in on the sides and the back, and this is the minimum you need for it to be safe. Zero wobble is acceptable!

Step 2 links:

- [1"x3"x 8' Furring strip board](#) (\$2 each)
- [2"x2"x8' Mix grain common board](#) (\$11 each)
- [Furniture leveling feet](#) (\$16)
- [1/2" auger drill bit](#) (\$13)



Figure 12: Leveling Furniture Feet Installed

Step 3: The Partial Window Screen



Figure 13: Partial Window Screen

Next, I created a partial window screen to fill in the space that would not be occupied by the aviary when the window was open. This is critically important for your birds safety to make sure they only have access to the aviary, and don't accidentally end up outside.

This screen, also made from furring strip board, fits into the window just like a standard screen, but is attached to the rest of the base. I squared the corners with heavy duty corner braces.

I purchased the screen material from Home Depot as well, and cut it to size. It was then pulled taught over the frame (once it was painted) and secured with about 8 furniture tacks per side.

It's tricky to get the tension just right, but if you've replaced window or door screens before, it's a very similar process.

Here in Figure 14, you can see the flush fit between the window screen and the window. This does not interfere with the functioning of the window, and it can be opened and closed as normal just as it was before.

Step 3 Links:

- [Pet resistant window screen](#) (\$17)
- [Corner braces](#) (\$6 for 2)
- [Furniture tacks](#) (but any small nail or staple gun will do)

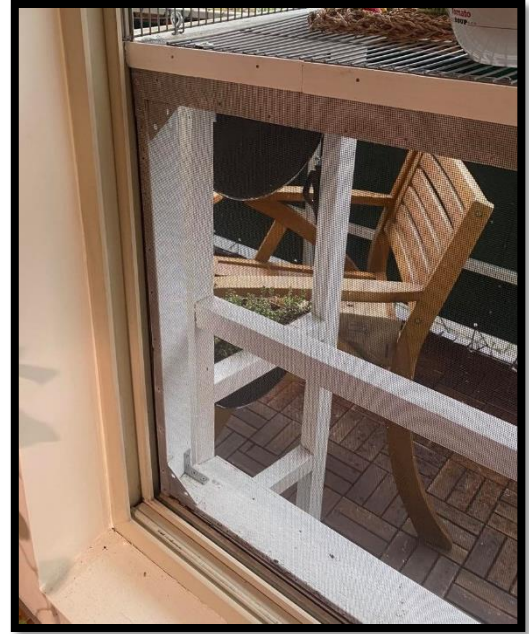


Figure 14: Partial Window Screen Installed

Step 4: Attaching the Cage to the Base

Once the base and the frame were constructed, I painted the entire frame with a coat of primer and around 4 coats of exterior paint. This will protect the aviary from rotting when exposed to moisture and make it easier to clean.



Figure 15: Aviary Base Before Removing Excess Material

Once painted, I attached the cage to the base and recycled the back of the original cage to make the bottom of the aviary, as can be seen in Figure 15.

After I dry-fitted the recycled back the base, I sawed off the excess material (still present in Figure 15) so that the window would be allowed to close, and sanded the sharp edges. The new cage bottom is fitted to the frame by screws fitted with washers drilled into the frame.

The cage is fitted to the frame with eyehooks fitted into the original attachment points (see Figure 16) but could also be attached with washers and screws.

Step 4 Links:

- [KILZ 2 all Purpose exterior primer](#) (\$13)
- [Rustoleum Protective Enamel](#) (\$17)

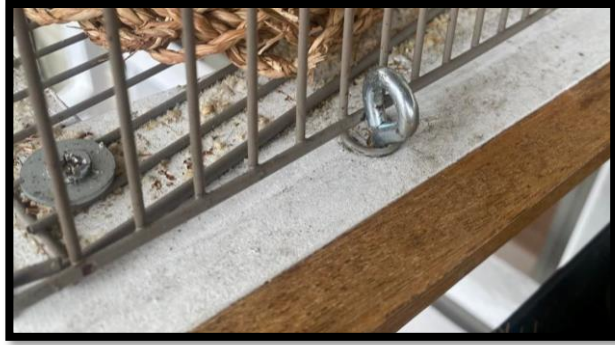


Figure 16: Cage and Base Attachments

Step 5: The Top Gap Blocker and Window Cling Placement

The final step of this build was building a piece to press-fit into the gap between the top of the cage and the window frame. This ensured that there were zero gaps between the aviary and the outside!



Figure 17: Interior view of the aviary

If your cage is perfectly square and there is no gap between your stand and the top of your window, a blocker isn't necessary! But since mine was a funky shape, I had to fill the gap.

This is held in place with tension like a spring, with the top of the cage pushing up on the blocker. I lined it with window strip insulation to mold to the shape of the cage bars.

Finally, I put window clings on the finished window, so Joanna has no problem telling the difference between when her aviary is closed and when it is open.

Step 5 Links:

- [Stick on window stripping](#) (\$14)
- [Leaf window clings](#) (\$9 for 20)

If you made it this far, congratulations! Hopefully, for the right DIY'er, this will be a good starting point to your own at home aviary, and (safely) enjoying Saturday morning coffee on your deck with your bird 😊

Chapter 2: Perches for the Modern Bird-Friendly home

Decorating my house has always been a game of balancing the desire to make my home as bird friendly as possible while still maintaining my personal style, a desire incongruent with the bright, flashy colors of most bird toys on the market. So, I've taken a DIY approach to making my apartment subtly bird friendly, a necessity given that Joanna is free-flighted, and almost never in her cage.

This section will cover different perch types that I've incorporated into my home décor.

0. Invisible furniture protection
 1. Panoramic Window Perches
 2. Wall Art Tiered Perch
 3. Fish tank foraging perch
 4. Birdie "Couch"
-

Hack 2.0: Invisible Furniture Protection

Project Difficulty: Beginner

Project Cost: under \$10

I'm including it first because I apply this **BELOW** every other hack I'm going to list in this section. It functions not only as a moisture barrier, but is the easiest surface to clean bird poop off of that I've ever encountered: **Clear Matte Contact Paper**.



Figure 18: Matte Contact Paper

I use it on all my wood furniture and windowsills, and it makes them easy to clean while being nearly invisible. It also removes damage free leaving your furniture in new condition

If you've never applied contact paper, it can be a little tricky at first, but its easy to get the hang of:

1. Measure your surface and cut a piece to size.
2. Separate first inch of backing from paper, and fold it flat.
3. Flip over and Adhere exposed area to surface
4. Starting from the center out to the edges, press down plastic with a credit card, using your other hand to slowly remove more of the backing.

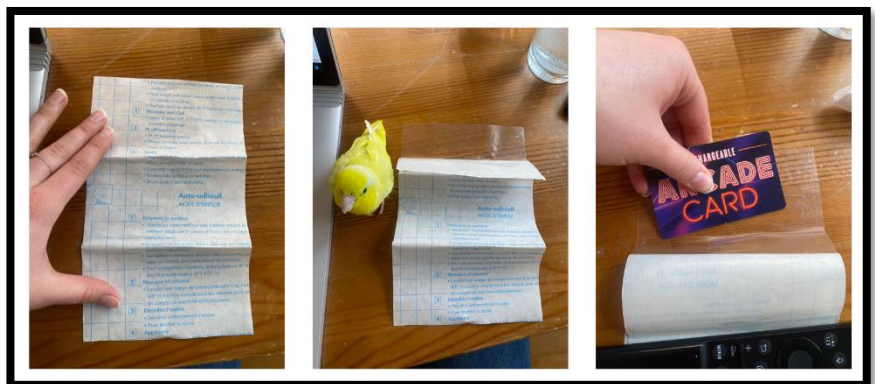


Figure 19: How to Apply Contact Paper

Hack 2.0 links:

- [Clear contact paper](#) (\$7)

(The link I've included is for Amazon, but I mostly buy this from home depot or places like Target or Walmart)

Hack 2.1: Panoramic Window Perches

Project Difficulty: Beginner

Project Cost: Under \$25



Figure 20: Panoramic Window Perches

Of all the hacks I've done for Joanna, this is definitely her most used. She probably spends 60% of her waking time sitting in her scarf rings and baking in the sunlight.

This one is extremely easy too! I just

1. Bought scarf holders from Ikea,
2. undid the stitching where necessary to create rows,
3. zip tied them together to reach the desired length, and
4. attached them to my window frame with wire command hooks.

(Though when it was clear Joanna liked the setup, I switched them out for screw-in hooks)

I've seen a bunch of folks do something similar for their birds, and it seems like it's always a hit with all the littlest species!

Hack 3.1 Links:

- [IKEA Komplement scarf hanger](#) (\$9)
- [Command hooks 10 pack](#) (\$11)

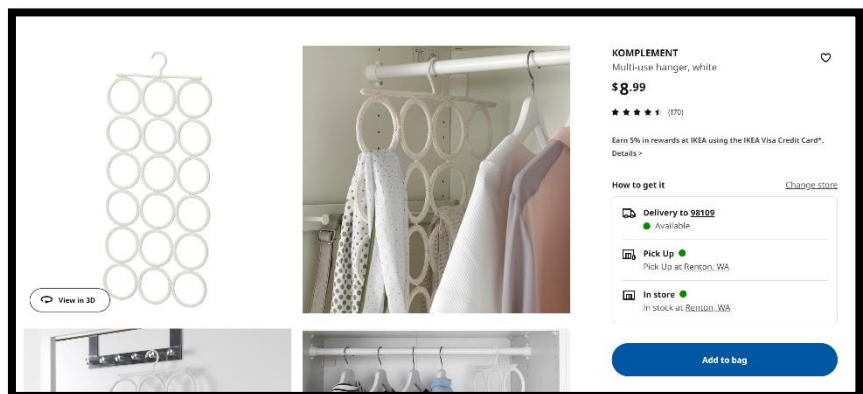


Figure 21: IKEA Komplement

Hack 2.2: Wall-Art Tiered Perch

Project Difficulty: Casual Crafter

Project Cost: under \$25

With this hack, I created the perfect place for Joanna to hang out and enjoy the humidity of the bathroom when my partner or I shower or bathe, without it looking out of place with the rest of my bathroom décor.

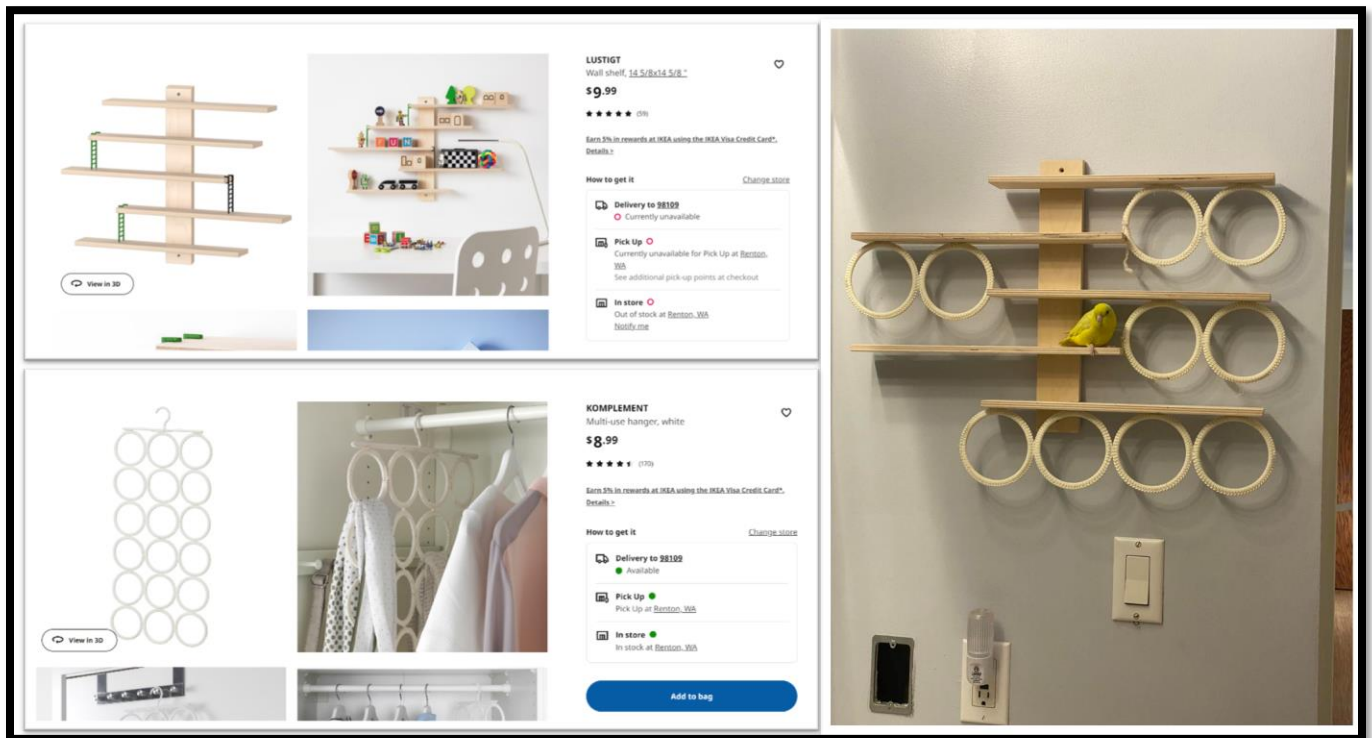


Figure 22: Components and finished product

You'll recognize the scarf holders from the earlier window perches hack, but the shelf is from IKEA too! All I did is assemble the shelf, hot glue scarf rings to it, and hang it!

I actually used Velcro command strips (a common theme in these hacks) to attach it to the wall so I can remove the shelf easily for cleaning.

Hack 2.2 links:

- [IKEA Lustigt shelf](#) (\$10)
- [IKEA Komplement scarf hanger](#) (\$9)
- [Velcro Command strips 14 pairs](#) (\$11)
- [Hot glue gun](#) (\$8)

(I've still listed this project cost as under \$25 because the hot glue gun and extra command strips can be reused, but I'm including the links here for posterity)

Hack 2.3: Fish Tank Foraging Perch

Project Difficulty: Easy

Project cost: under \$25 (assuming you already have fish!)



There are very few things Joanna enjoys more than watching my aquariums, an enrichment activity we started to try and help reduce her plucking. She loves it so much that **I went and made her her own attached foraging spot** to play around in while she enjoys fish TV, and her own Instagram dedicated to watching her watch the fish! (@ilookatfish)

For this hack, **I took some of her plastic containers that came with the cage I used for the aviary, and sawed off the back connection pieces to make them flat**. But, if you don't feel comfortable using a saw, you can just as easily use any small, square, plastic container.



I then took **black velcro command strips** (because they matched my dark aquarium substrate), cut off the removal tabs, and attached one to my fish tank, and one to my foraging bin!

I then filled the container with **uncooked popcorn seeds** (my favorite foraging medium for small birds) and hid some treats in the mix! **The velcro attachment makes these foraging stations easy to remove, refill, and clean.**

This keeps Joanna busy and happy for literal hours while I get work done during they day, and is a really consistent source of joy and enrichment in her life.

If you don't have a fish tank, however, foraging trays like these could just as easily be applied to your windows so your birds can instead perch and enjoy the views outside.

Hack 2.3 links:

- [2 Pack Plastic food dish](#) (\$9)
- [Black Velcro Command strips 20 pairs](#) (\$14)
- [Bulk Raw popcorn seeds](#) (\$15)

Hack 2.4: Birdie “Couch”

Project Difficulty: Intermediate

Project Cost: Under \$25

As far as hacks that have reduced joanna’s plucking goes, this one has made a huge difference. **Because she didn’t have a “couch” of her own, she would sit on my partner or I in the evenings.**

I made her this after realizing how much she liked to sit on the towels in the bathroom. Now that she has her own spot, she feels just as included in TV time and is much more independent in the evenings.



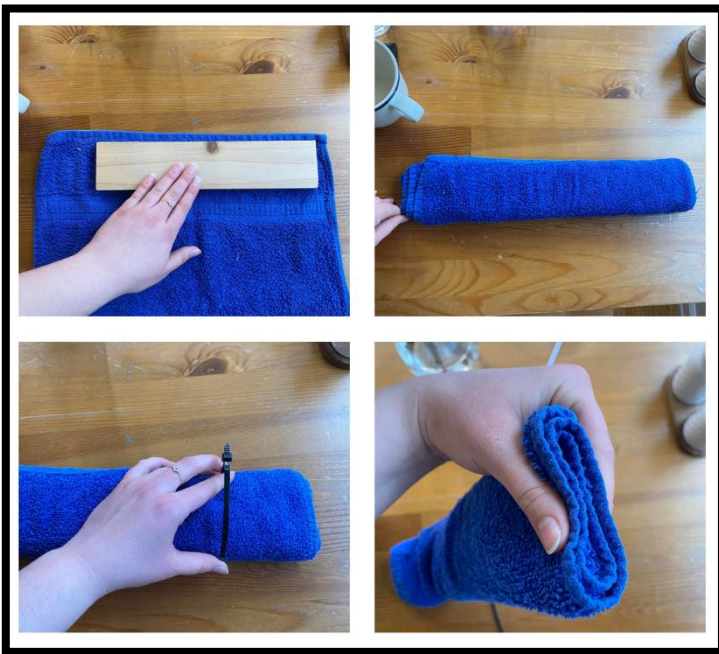
Making her “couch” was really easy, just requiring:

- Some scrap wood
- An old washcloth
- Zip-ties
- A needle and thread

First, I started by wrapping the piece of wood in the old washcloth. Next, I zip tied it to the wood in many places to keep it secure. Finally, I sewed up the edges of the “couch” after cutting off the excess material.

I was then able to zip-tie this to my plant shelf, and the couch was complete!

If you don’t have a zip-tieable surface you could likely clamp, or screw it, into whatever shelf like surface you have.



Thanks for reading, I hope some of these have inspired you to add bird DIY to you home! **If you enjoyed this, or need help with any of these hacks, be sure to let me know!**

- Email: carltoncraftsnyc@gmail.com
- Instagram: @carltoncrafts (Art) and @ilookatfish (Joanna’s Instagram)
- Facebook: Carlton Crafts Illustrated Bird Portraits