

Inexpensive Underwater Photography

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Most Underwater Photography

- Film, DSLR, or mirrorless camera
- Underwater housing ~\$1500
- Underwater strobes ~\$1000 each
- Outriggers, etc., etc. ~\$1000
- ~\$4500 + the camera!
- Cost can run a lot more
- New housing if you upgrade cameras
- Great results, if you got the bucks



<https://pixabay.com/images/search/underwater/>

It can be done cheaper

- Lots of options
 - Rugged point and shoot camera \$500
 - GoPro style adventure camera \$56 to \$450
 - Disposable underwater film camera 3 for \$60
 - Cellphone housing \$45
 - Waterproof flashlight \$ 25 to \$100
 - Cellphone housing with LED lights \$750



Ruggedized Point and Shoot

- Olympus TG-6 is the leader
- Amazon \$495 package includes accessories
- Still or video
- Five underwater modes (shallow, wide, close-up, macro, HDR)
- Easy to use; most like a DSLR or mirrorless
- Also ruggedized for cold weather, shock
- Works for photos above water as well



Shots from Tough TG-6



Homosassa Springs, FL 12/29/2022
Snorkeling with Manatees

Akaso EK7000

- No question: it's a GoPro knockoff
- GoPro cost: \$250 to \$450
- Akaso EK 7000: \$56
 - Very popular knock-off, good reviews
- Comes with a bunch of fittings
 - \$25 kit adds many more options
- Go Pro vs. Akaso?
The debate goes on
- Annoyance: need to reset the clock when you change batteries



Frame Grabs from Akasa EK7000

- Maui HI, 9/11/2018, snorkeling
- Searching for Humuhumunukunukuapuaa
- Frame grabs, not processed



Things to Consider

- Plan ahead, and know what to expect
 - Snorkeling in ocean surf: rhythmic current can easily move you 10-20 feet
 - Near shore, lots of bubbles
 - Snorkeling in a river: constant current will push you one direction
 - Depth conditions: relatively consistent or changing
 - Lots of swimmer activity leads to murky water, poor visibility
- Light travels poorly underwater
 - Red light is especially filtered; be ready to post-process white balance
 - Any more than about 10 feet, heavy blue cast
 - Scuba divers deep enough to need some sort of light for photography
 - Flash is best off-axis, because there are bubbles and inclusions in the water

Color Shift Examples

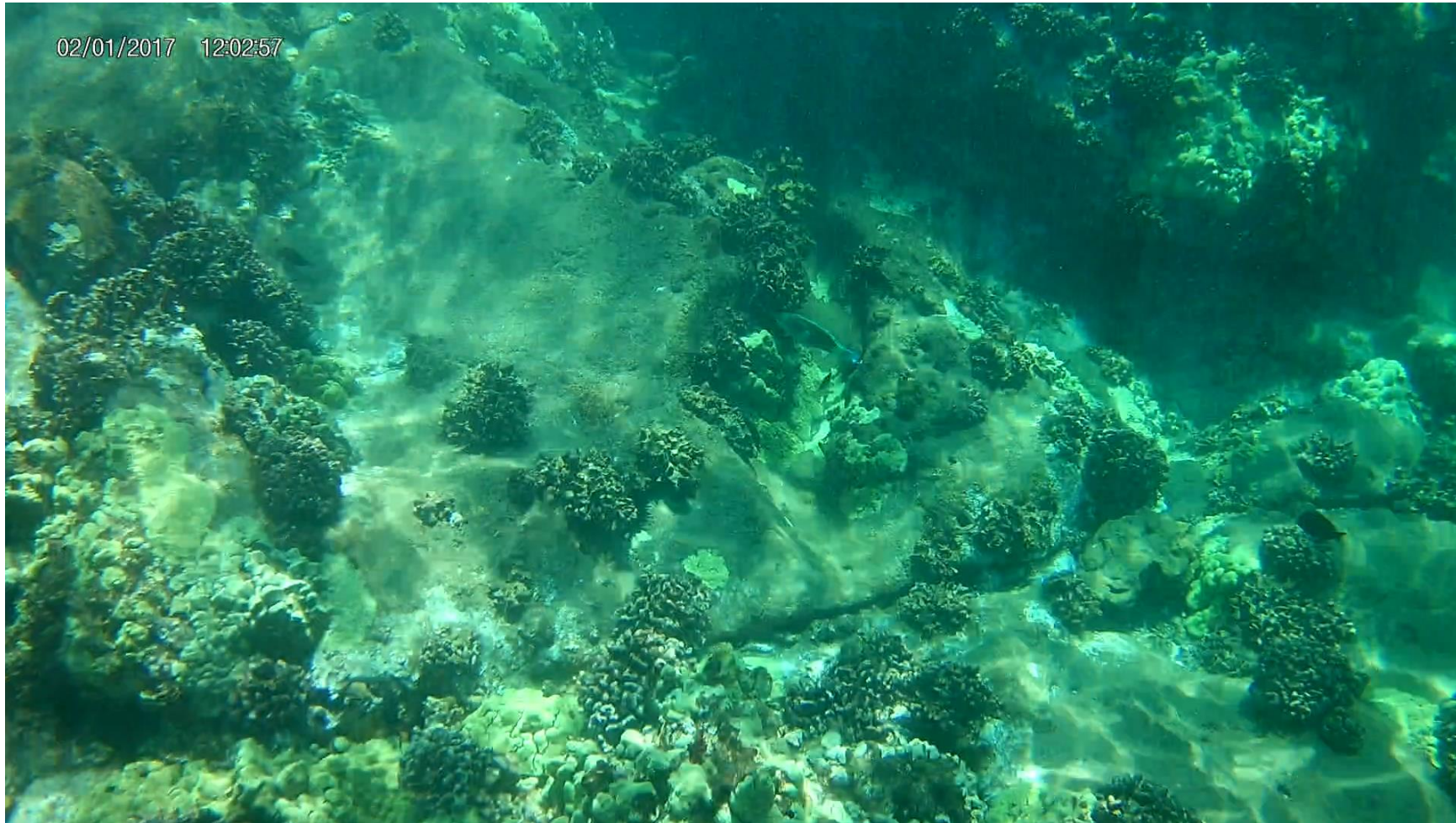


As shot



Corrected in Elements

A Few Video Examples



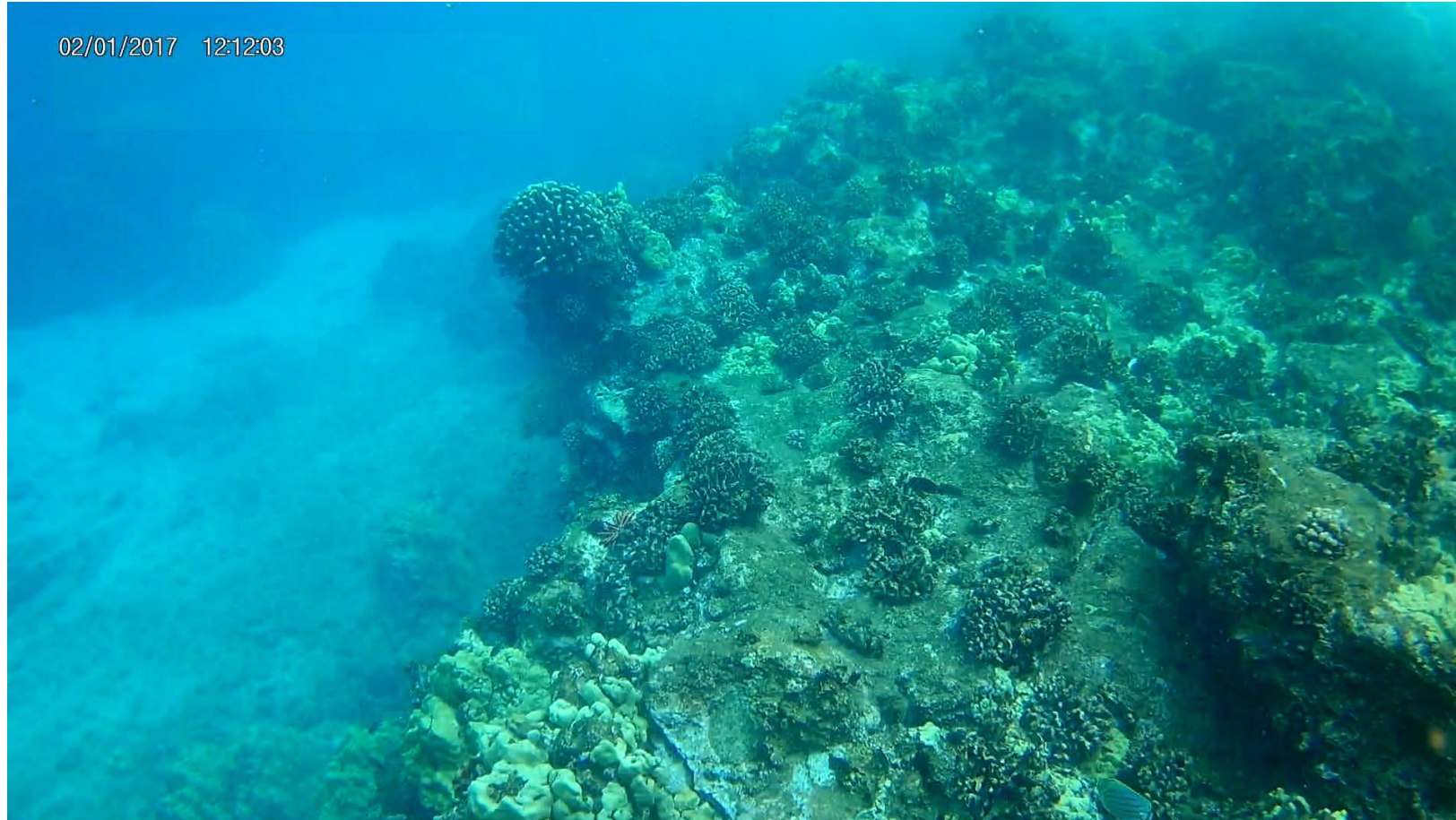
Cool parrot fish at
about 10 sec

Coral

Other swimmers

Notice the heavy
blue cast in the
background (looking
through more water)

Drifting Near Shore



Above and Below



- Humuhumu
nukunuku
apuaa
at 30 to 40 sec!

Going to School...

