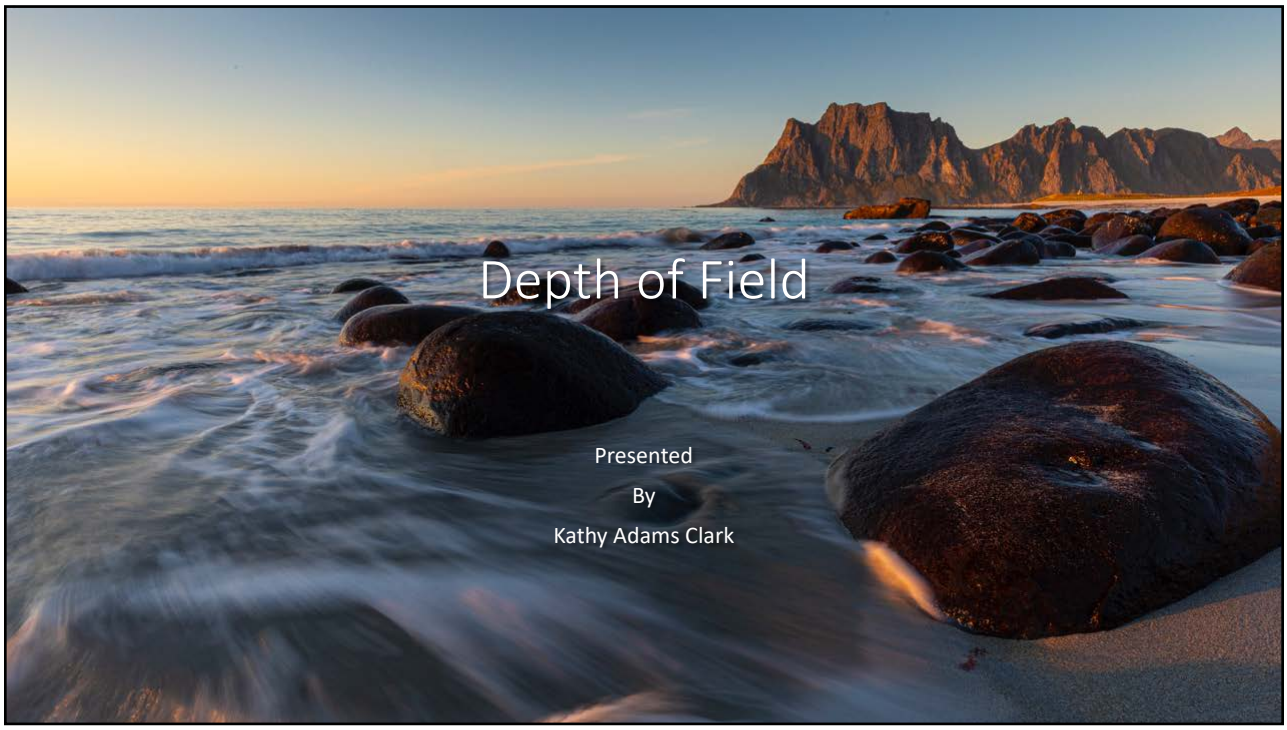


1

Depth of Field

- The range of distance in front of and behind the object focused by an optical instrument within which other objects will also appear clear and sharply defined. (dictionary.com)
- The distance between the nearest and the furthest objects giving a focused image. (Lexico.com)

2

Depth of Field 101

f/4

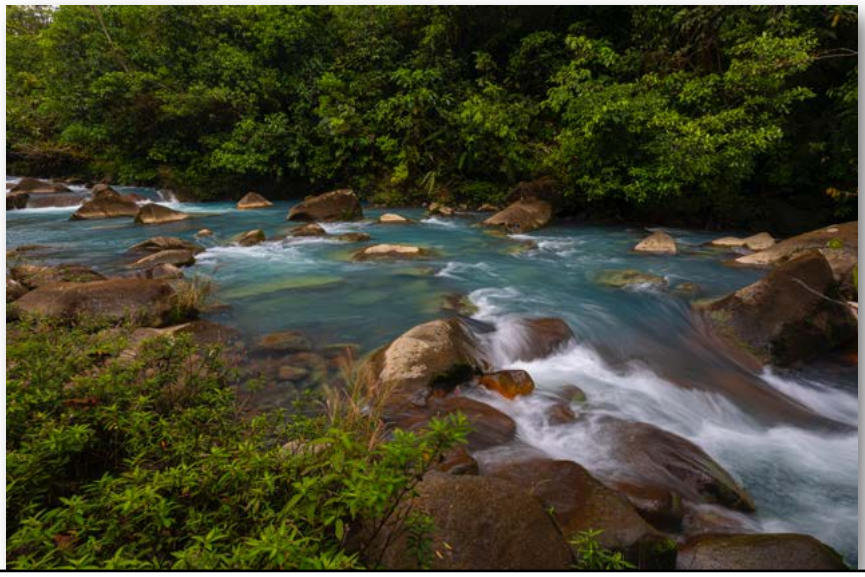
3

Depth of Field 101

f/8

4

Depth of Field 101



f/22

5

Deep Dive into Depth of Field

Depends on

- Distance to Subject
- Lens
- Aperture

6

7

8

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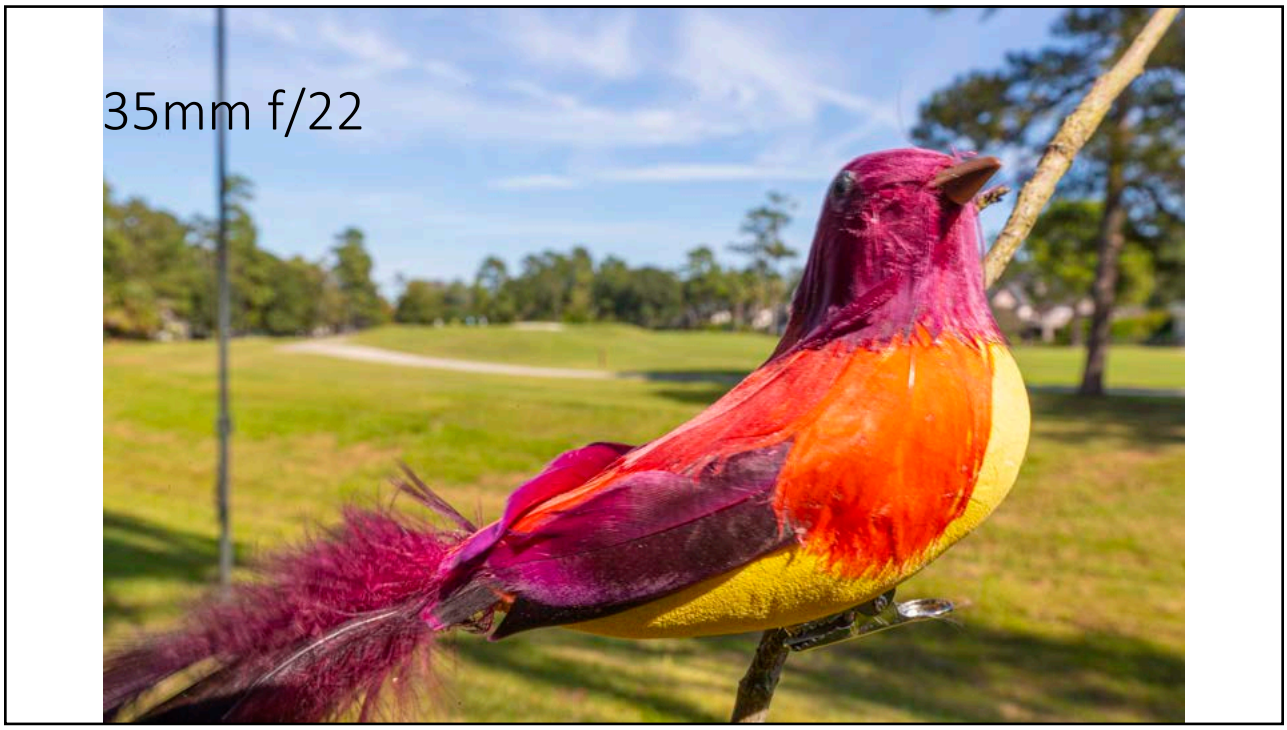
11

12



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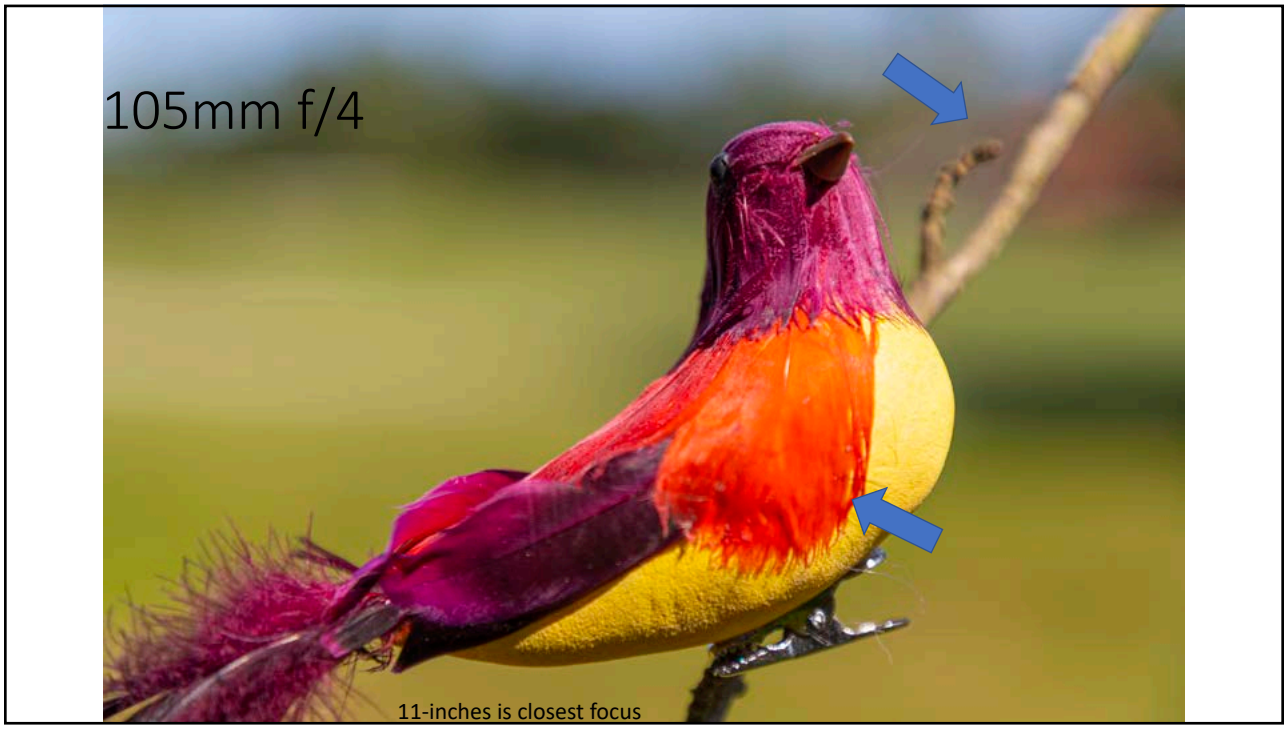

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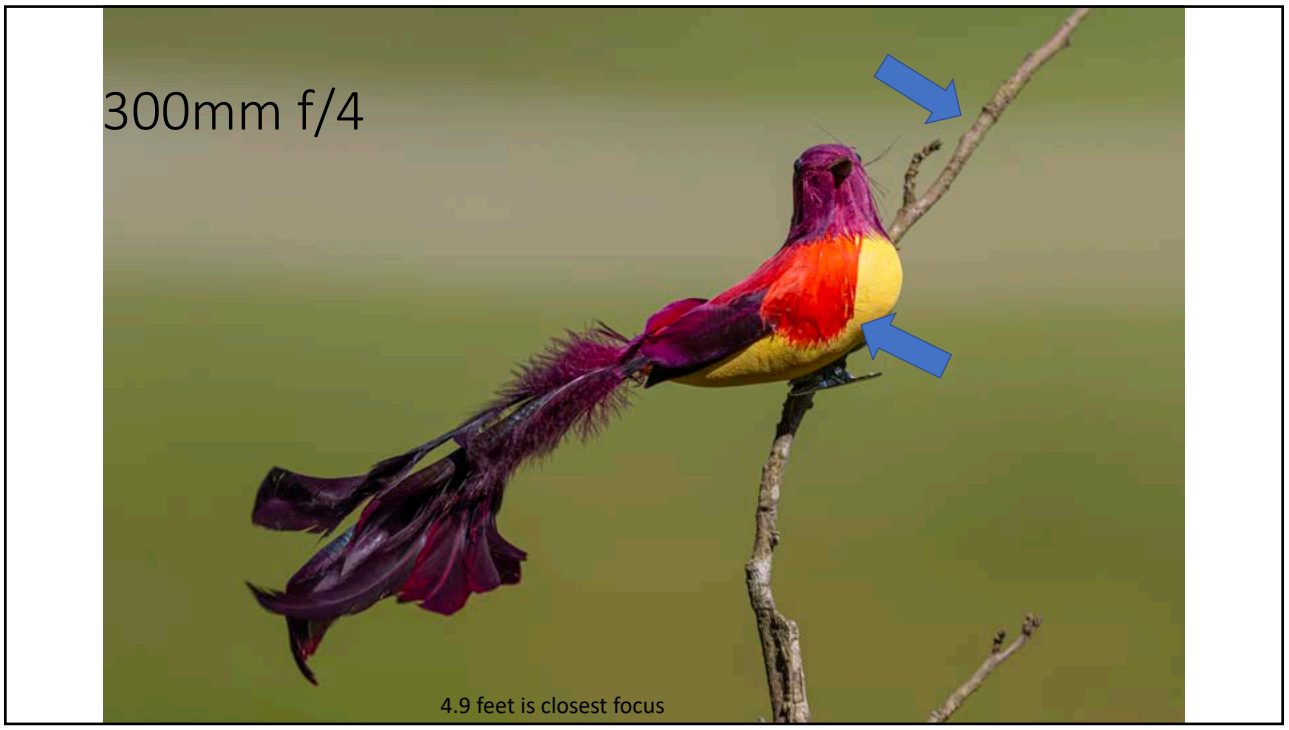


17

18


300mm f/22

19


300mm f/4 not flat to the film plane
4.9 feet from subject

20


300mm f/8 not flat to the film plane
4.9 feet from subject

21


300mm f/22 not flat to the film plane
4.9 feet from subject

22


24mm f/4 not flat to the film plane
11-inches from subject

23


24mm f/8 not flat to the film plane
11-inches from subject

24


24mm f/22 not flat to the film plane
11-inches from subject

25


105mm f/4 not flat to the film plane

26


105mm f/8 not flat to the film plane

27


105mm f/22 not flat to the film plane

28


16mm f/4 not flat to the film plane
11-inches from subject

29


16mm f/8 not flat to the film plane

30


16mm f/22 not flat to the film plane

31


35mm f/4 not flat to the film plane

32


35mm f/8 not flat to the film plane

33


35mm f/22 not flat to the film plane

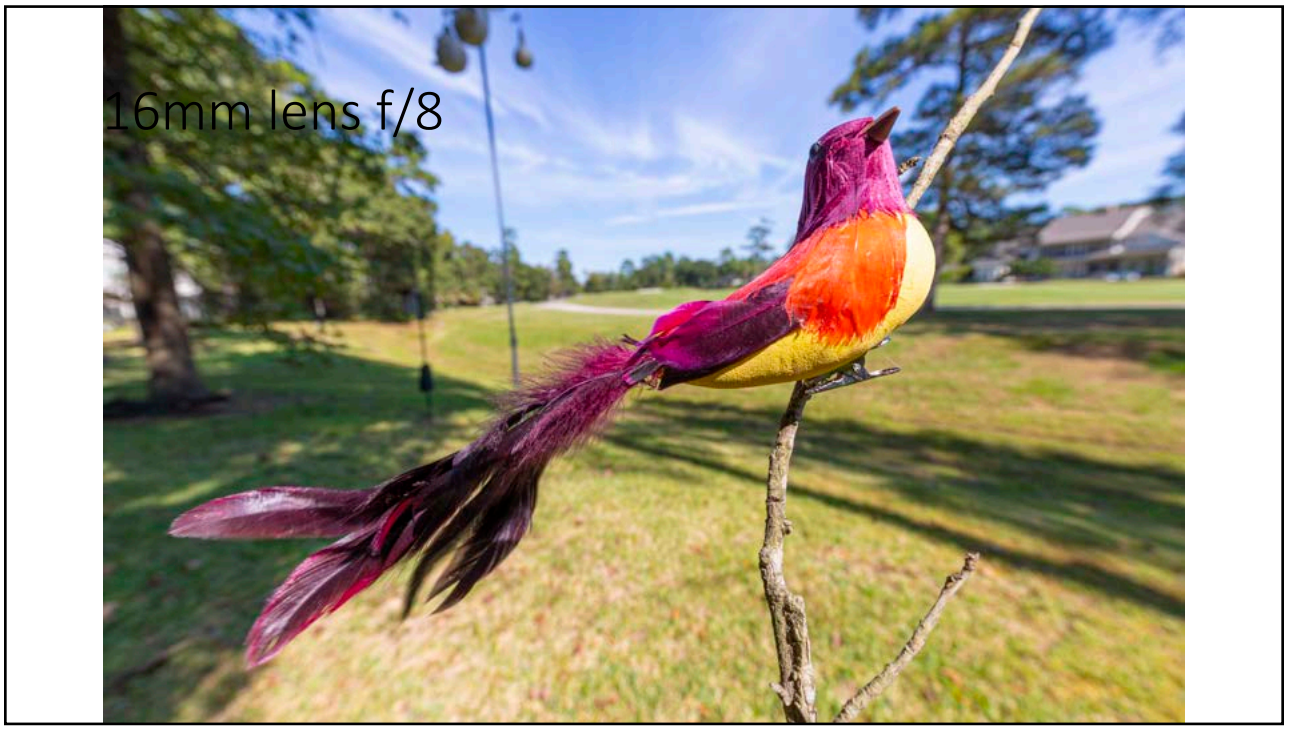
34

Depth of Field

- Depends on
  - **Distance to Subject**
  - Lens
  - Aperture

35

36



37

38


16mm f/4 not Flat and 12 feet away

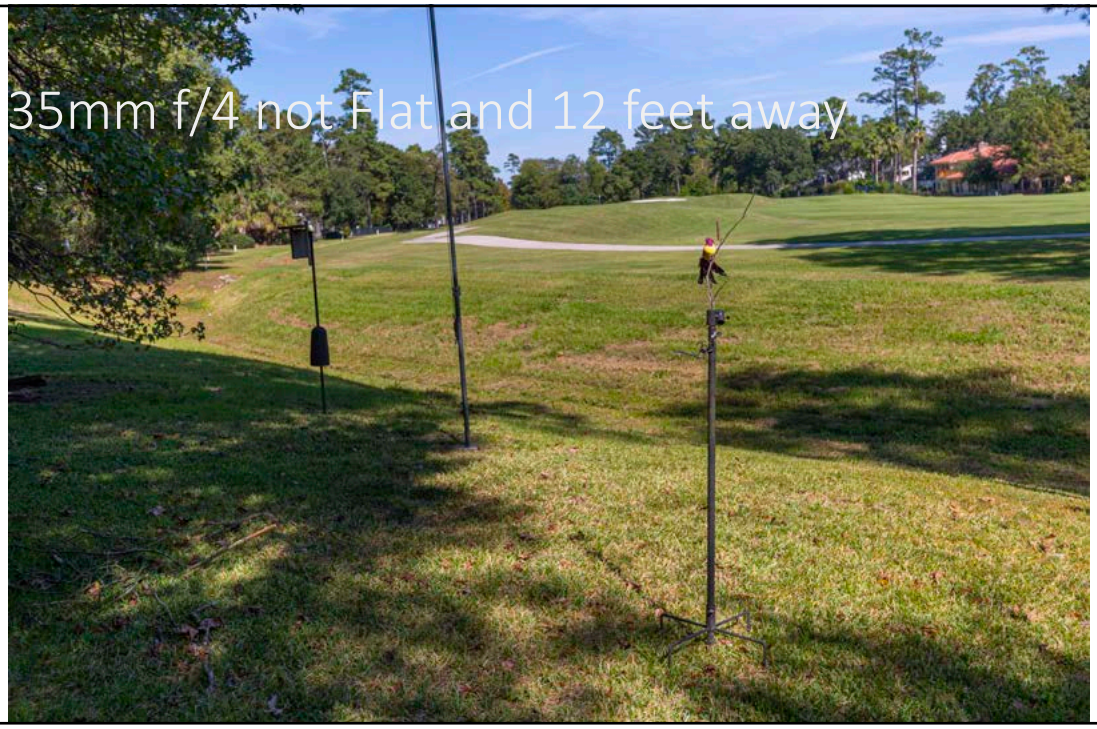
39


16mm f/8 not Flat and 12 feet away

40


16mm f/22 not Flat and 12 feet away

41


35mm f/4 not Flat and 12 feet away

42


35mm f/8 not Flat and 12 feet away

43


35mm f/22 not Flat and 12 feet away

44


24mm f/4 not Flat and 12 feet away

45


24mm f/8 not Flat and 12 feet away

46


24mm f/22 not Flat and 12 feet away

47


105mm f/4 not Flat and 12 feet away

48


105mm f/8 not Flat and 12 feet away

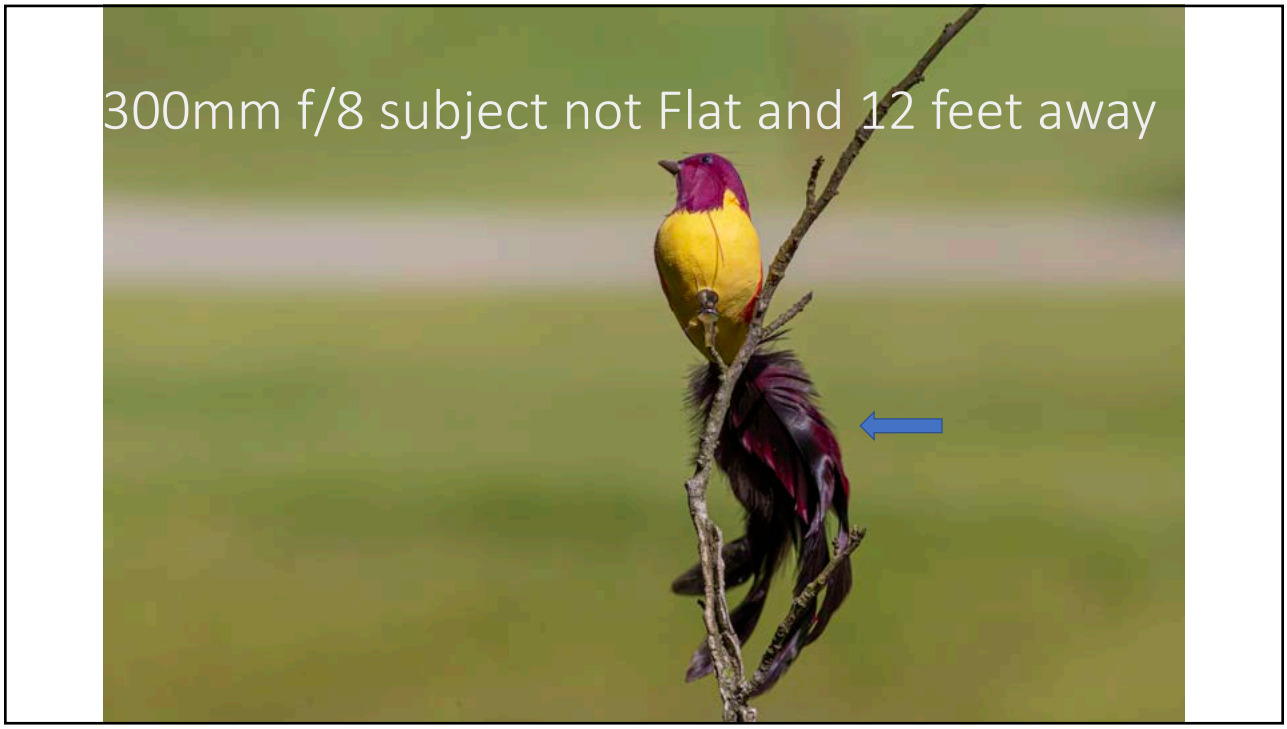
49


105mm f/22 not Flat and 12 feet away

50


300mm f/4 subject not Flat and 12 feet away

51


300mm f/8 subject not Flat and 12 feet away

52


300mm f/22 subject not Flat and 12 feet away

53


300mm f/4 flat and subject is 12 feet away

54


300mm f/8 flat and subject is 12 feet away

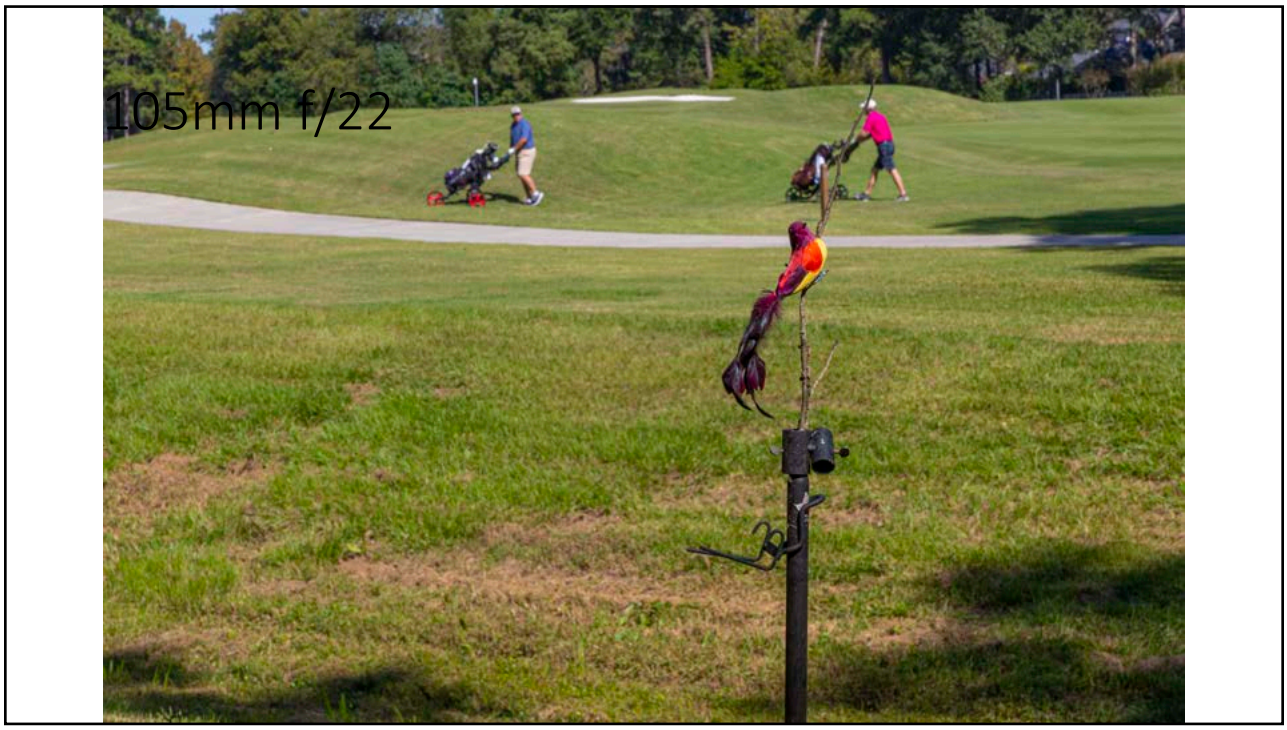
55


300mm f/22 flat and subject is 12 feet away

56

57

58



59

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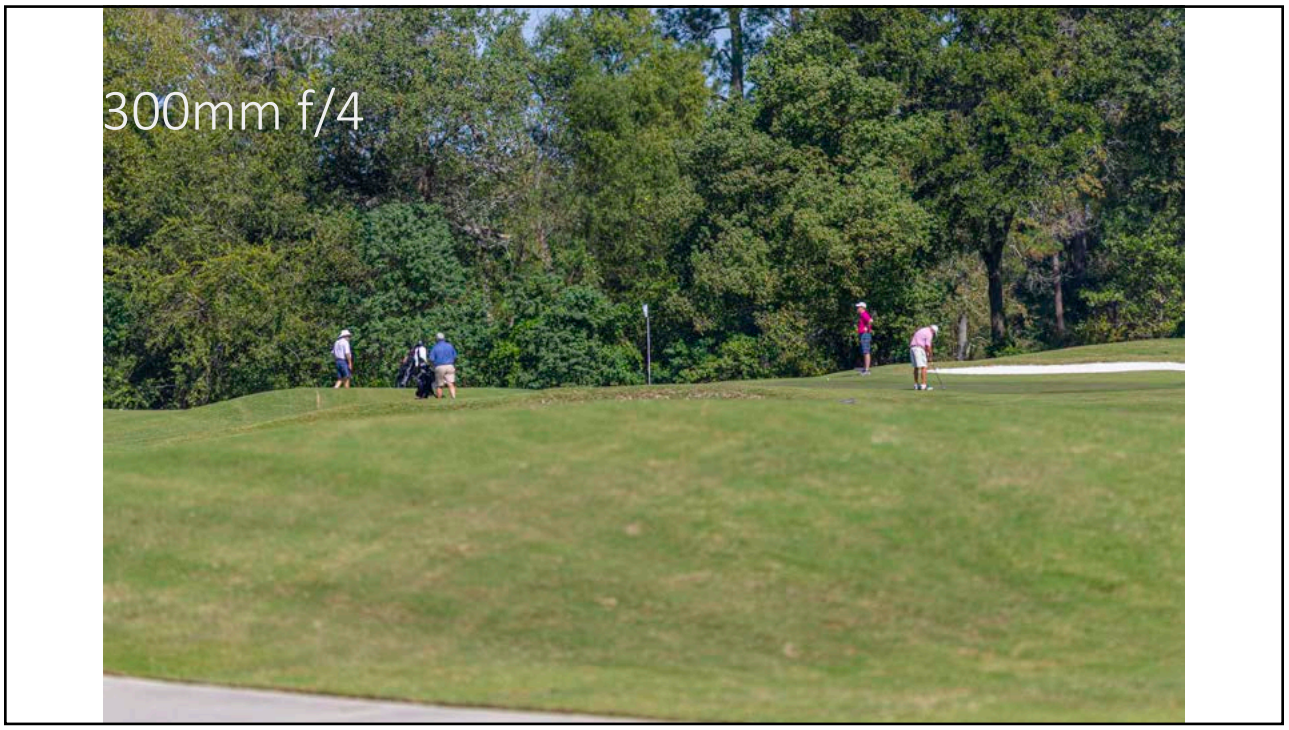
65

Depth of Field

- Depends on
  - **Distance to Subject**
  - Lens
  - Aperture

66



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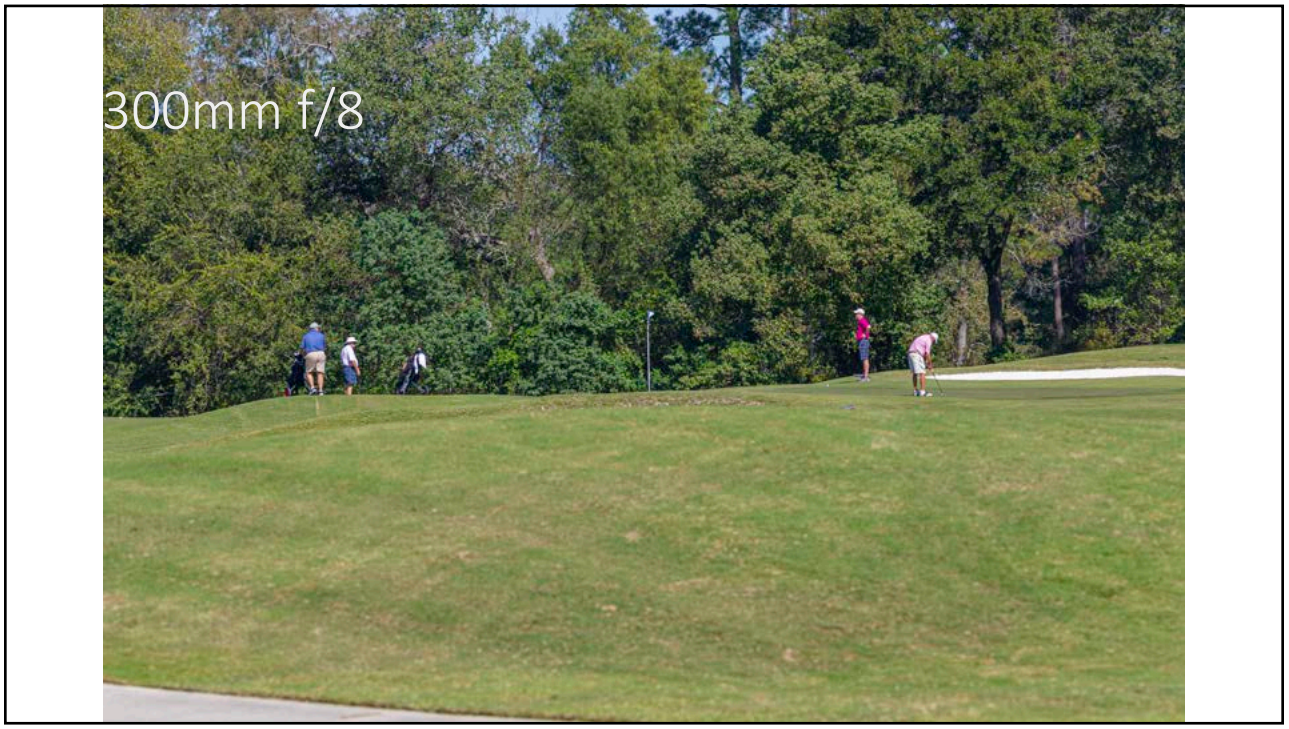

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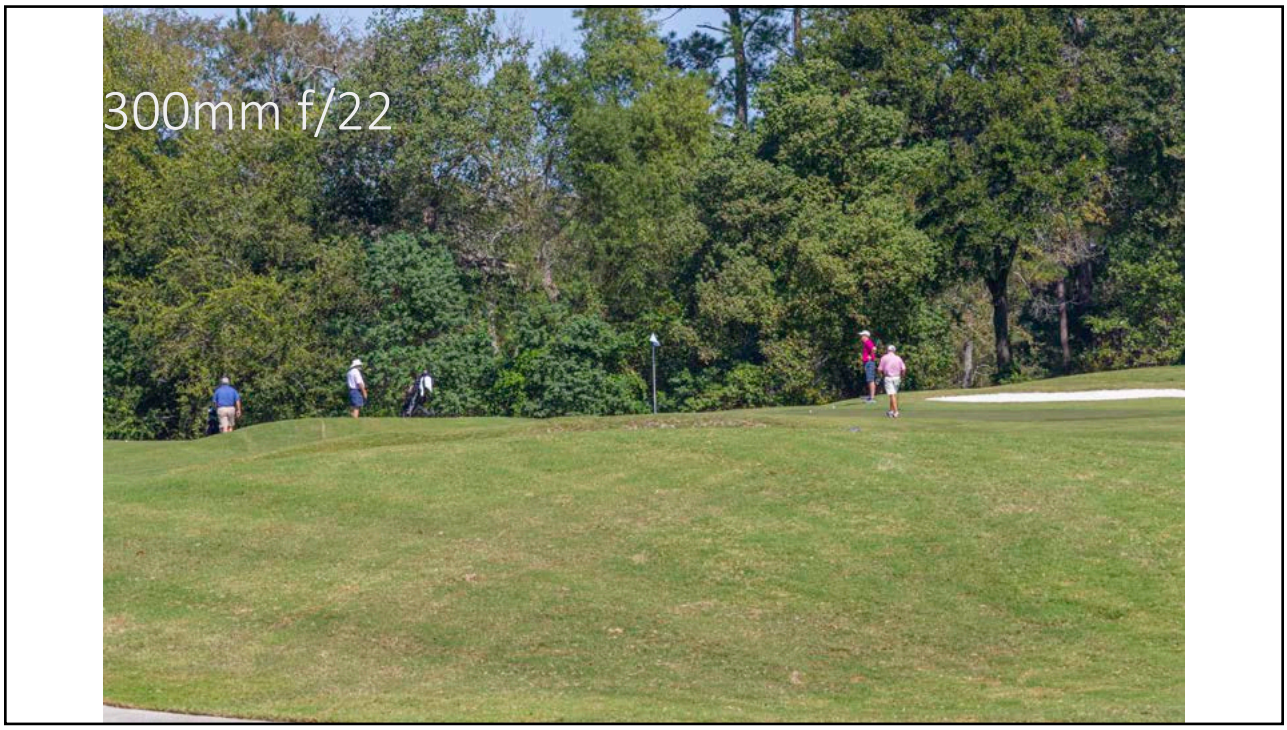

69

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71

72

Depth of Field

- Depends on
  - **Distance to Subject**
  - Lens
  - Aperture

73

74

75

Buying A Lens

Nikkor
500mm
f/4

Nikkor
500mm
f/5.6

Canon
800m
f/11

76

Buying a Lens

Canon 70-200mm f/2.8 L IS III
$2099 and 3.17 lbs

Canon 70-200mm f/4 L IS II
$1299 and 1.7 lbs

77

Buying A Lens

78

16-35mm super wide lens Minimum focusing 11-inches

79

To Maximize Depth of Field

- Understand the basic concepts
- How those concepts apply to each lens
- **Understand flat to the film plane**
- Understand hyperfocal distance

80


Depth of field is a flat plane parallel to the back of the camera

81


Depth of field is a flat plane parallel to the back of the camera

82

83

84

85

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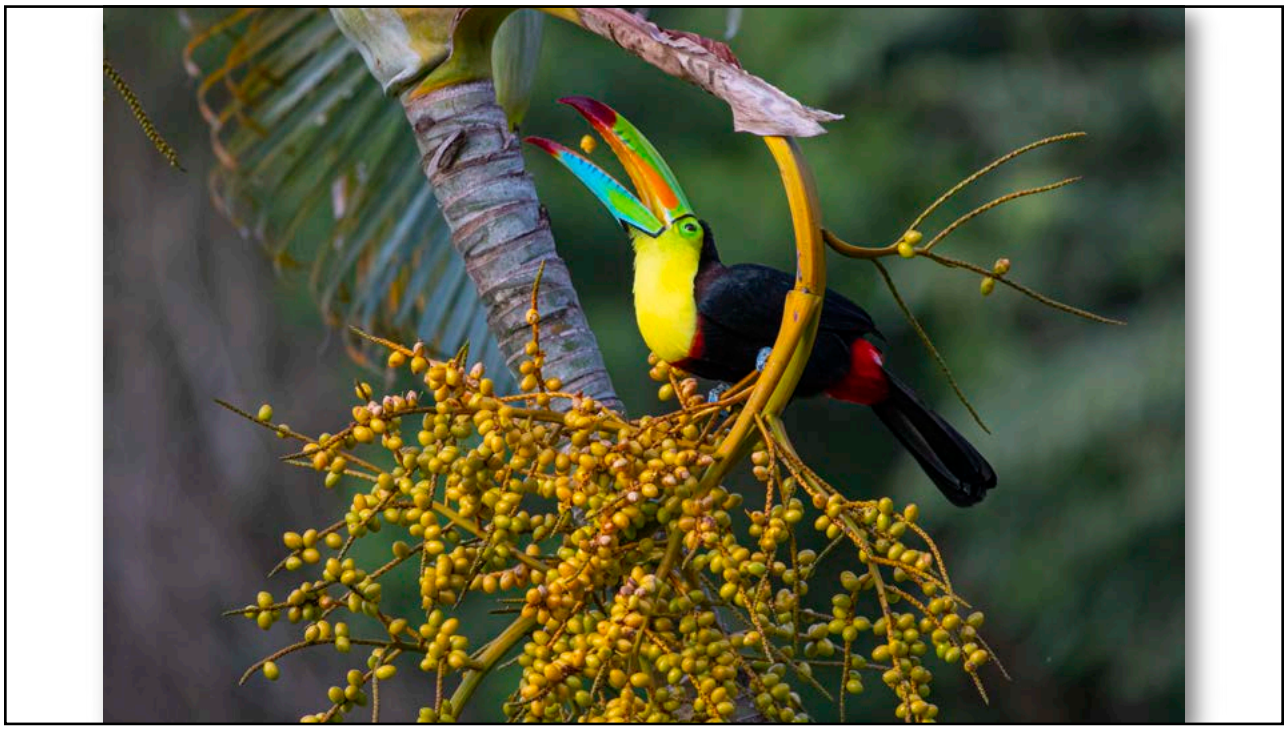

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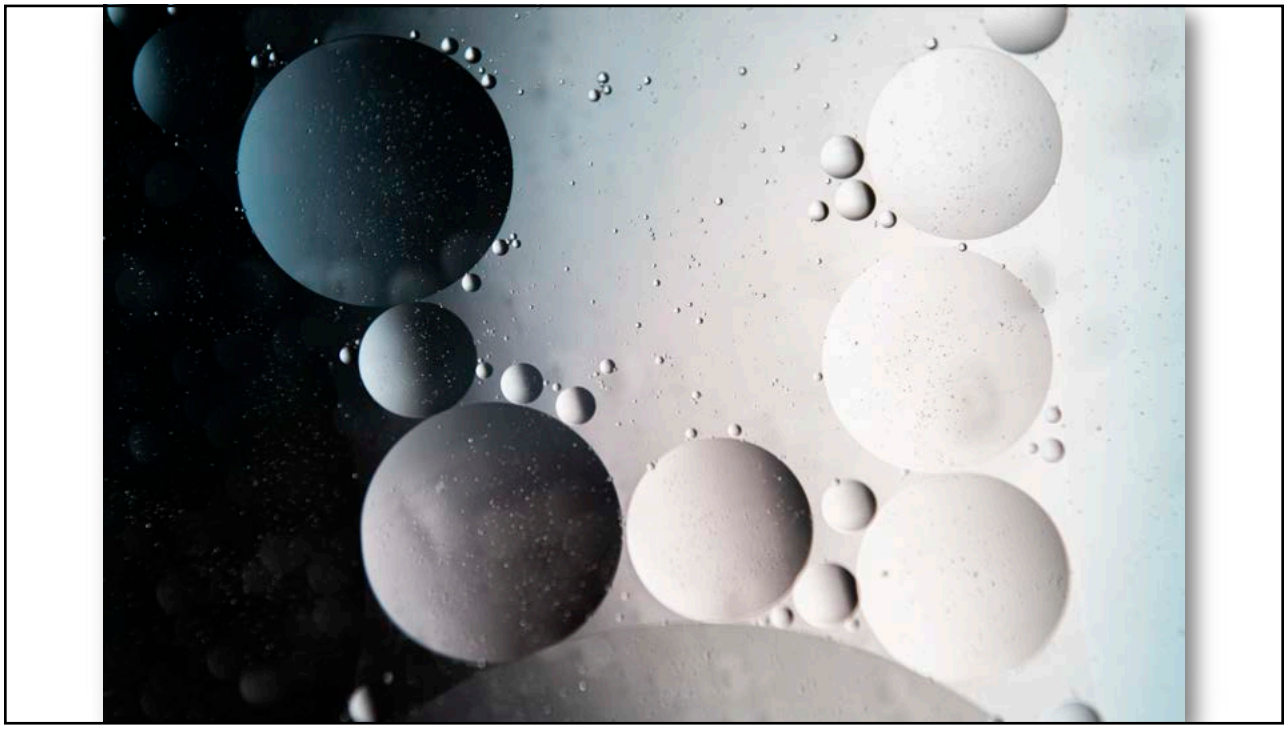


94

To Maximize Depth of Field

- Understand the basic concepts
- How those concepts apply to each lens
- Understand flat to the film plane
- **Understand hyperfocal distance**

95

If you focus this close & use f/16 then 2.25' to 2.65' will be in focus

96

97

Should I focus 10-feet away?

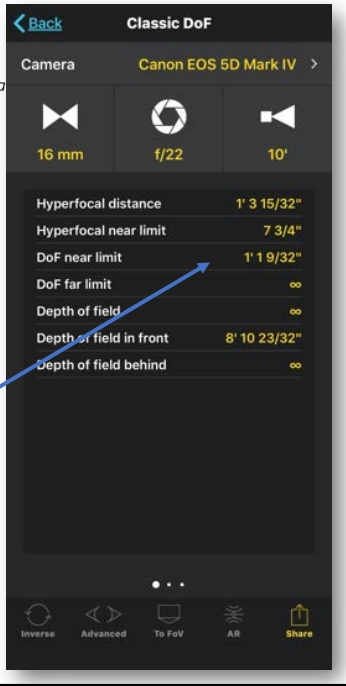
That's 3048mm awa

Hyperfocal Distance

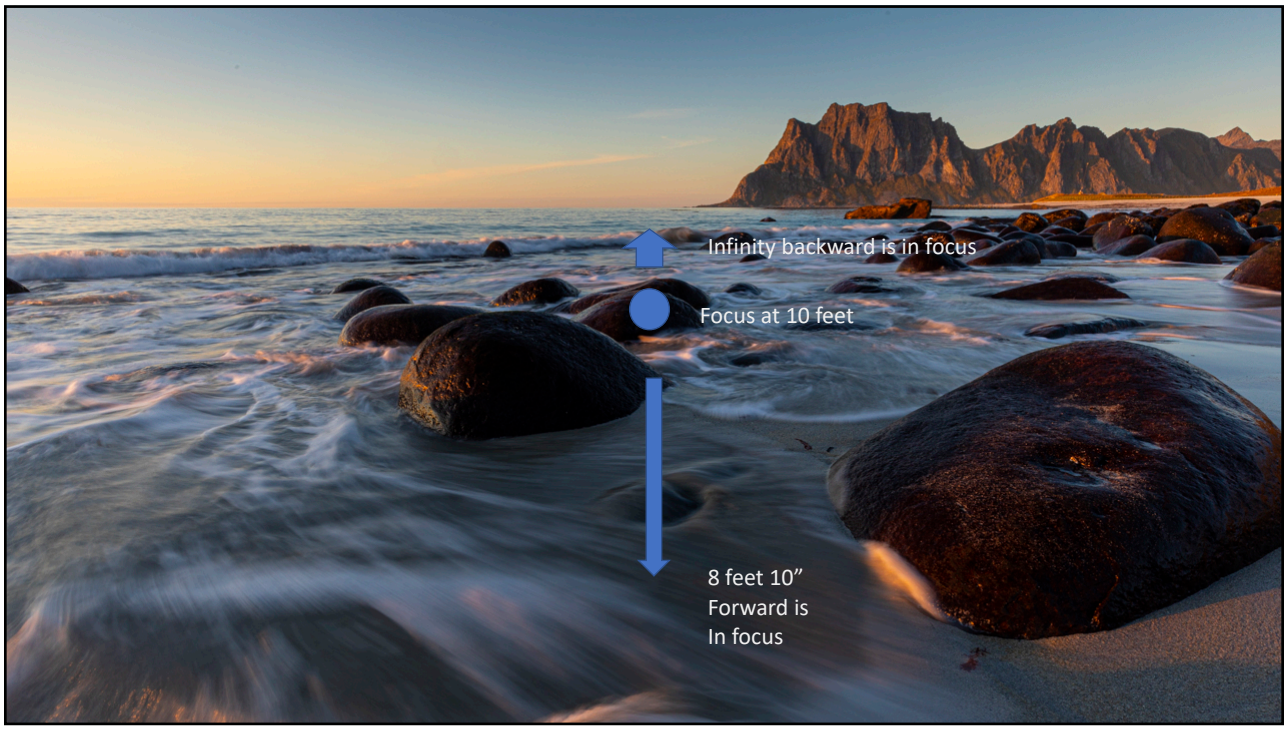
$$\frac{16mm \times 16mm}{f/22 \times 0.03} = \frac{256mm}{.66} = 387mm = 15.23 \text{ inches} = 1.27 \text{ feet}$$

Depth of field Near Point

$$\frac{387mm \times 3048mm}{(387mm + (3048-16mm))} = \frac{1{,}179{,}576}{3419} = 345mm = 13 \text{ inches} = 1.13 \text{ feet}$$



98


Infinity backward is in focus
Focus at 10 feet
8 feet 10”
Forward is
In focus

99

100

101

102

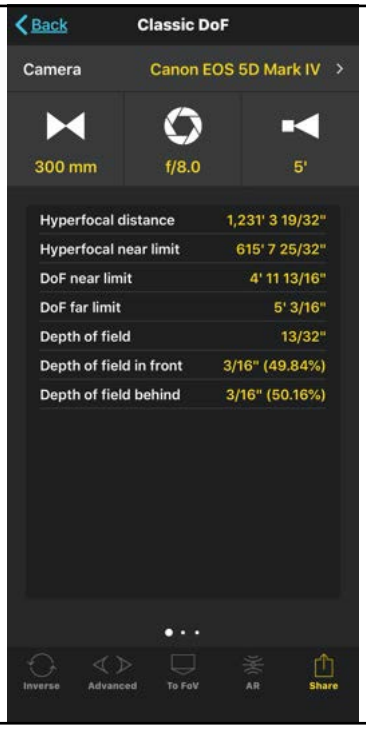
If I'm using a 16mm lens at f/22

And my focus point is 10-feet away

PhotoPills

103

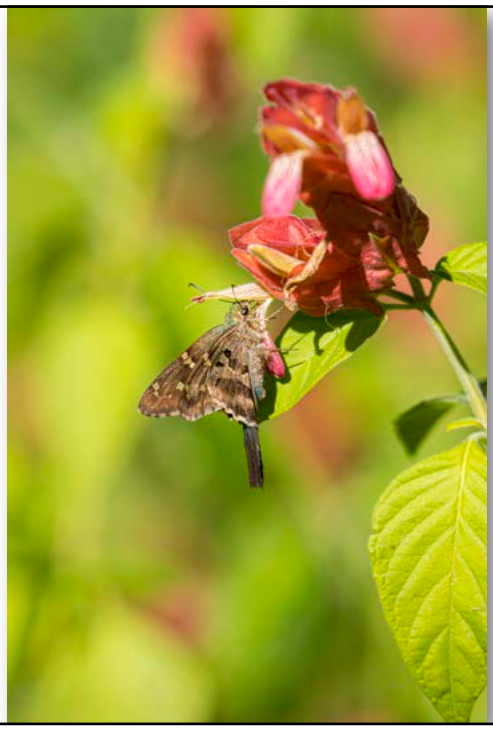
If I'm using a 300mm lens at f/8



And my focus point is 5-feet away

PhotoPills

104



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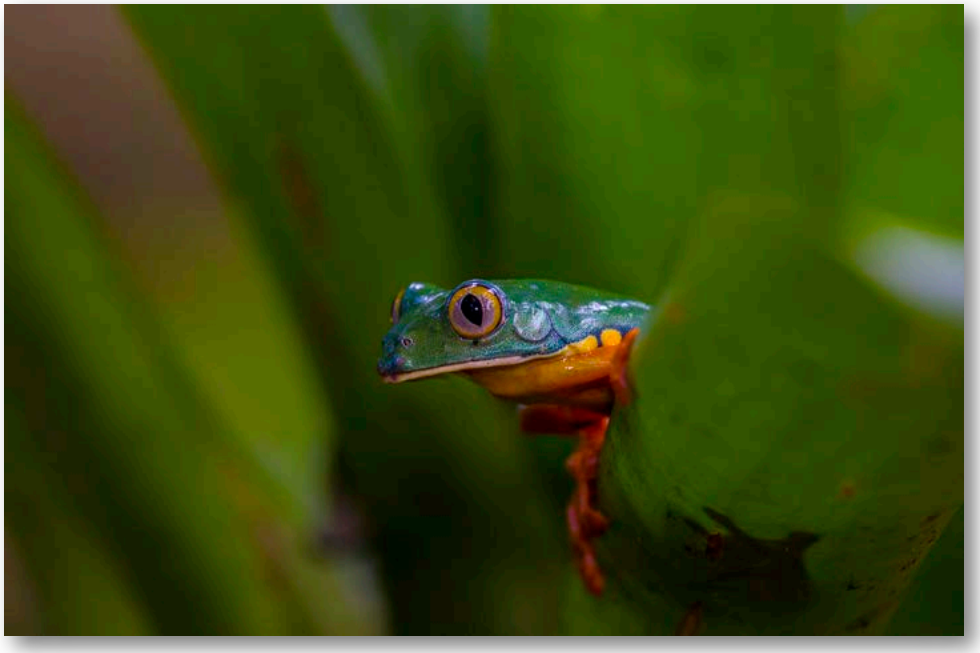


109

110

111

Classes, Workshops, Tours

- Basic Photography
- Intro to Lightroom/Adobe Camera Raw
- Textures Master Class
- Flowers Master Class
- Night Master Class

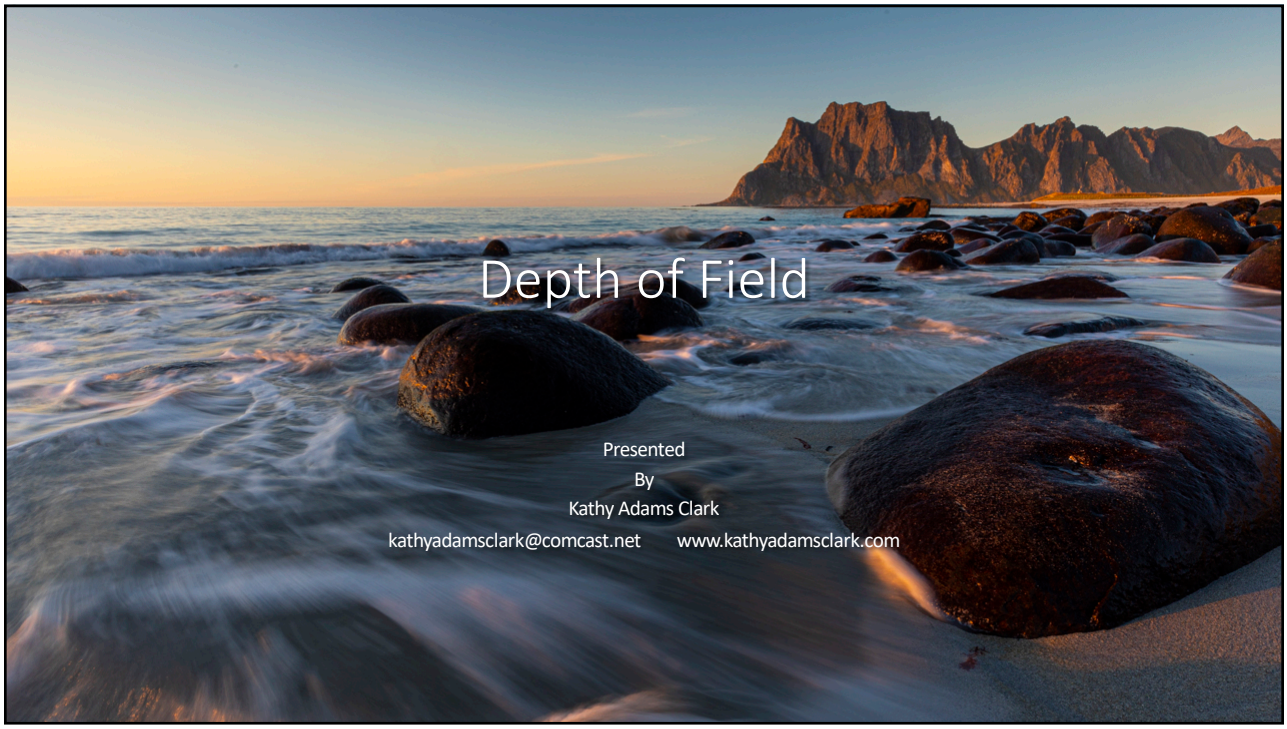
- Winter Bird Photo Workshop
- Spring Wildflower Workshop

112

Tidemark Calendars

www.tide-mark.com

113



114

115

116

117