

Table S1. The wavelengths of maximum absorbance (λ_{max}) of the visual pigments contained within the photoreceptors of animal eyes.

| Phylum | Class | Order | Family | Species | $\lambda_{\text{max}}^{\text{l}}$ | Source |
|------------|-------------|---------------------------|----------------------------------|-----------------------------------|-----------------------------------|--|
| Arthropoda | Arachnida | Araeae | Araneidae | <i>Argiope amona</i> | 360,490,540 | (Yamashita & Tateda 1978) |
| | | | | <i>Argiope bruennichi</i> | 360,490,540 | (Yamashita & Tateda 1978) |
| | | Ctenidae | <i>Cupiennius salei</i> | | 340,480,520 | (Walla <i>et al.</i> 1996) |
| | | Lycosidae | <i>Lycosa</i> sp. | | 365,510 | (DeVoe 1972) |
| | | Salticidae | <i>Menemerus confusus</i> | | 360,490,530,538,580 | (Yamashita & Tateda 1976) |
| | Insecta | Blattodea | Blattidae | <i>Phidippus regius</i> | 370,532 | (De Voe 1975) |
| | | | | <i>Plexippus validus</i> | 360,520 | (Blest <i>et al.</i> 1981) |
| | | Coleoptera | Carabidae | <i>Periplaneta americana</i> | 365,505 | (Mote & Goldsmith 1970; Paul <i>et al.</i> 1986) |
| | | | | <i>Carabus auratus</i> | 348,430,500,620 | (Hasselmann 1962) |
| | | | | <i>Carabus nemoralis</i> | 348,430,500,620 | (Hasselmann 1962) |
| Diptera | Coccoidea | Coccinellidae | <i>Coccinella septempunctata</i> | | 370,520 | (Lin & Wu 1992) |
| | | | | <i>Bicellonycha wickerhamorum</i> | 400,560 | (Lall <i>et al.</i> 1988) |
| | | Lampyridae | <i>Photinus collustrans</i> | | 425,560 | (Lall <i>et al.</i> 1988) |
| | | | <i>Photinus macdermotti</i> | | 400,575 | (Lall <i>et al.</i> 1988) |
| | | | <i>Photinus marginellus</i> | | 375,565 | (Lall <i>et al.</i> 1988) |
| | Lepidoptera | <i>Photinus pyralis</i> | | | 375,570 | (Lall <i>et al.</i> 1988) |
| | | | <i>Photinus scintillans</i> | | 450,580 | (Lall <i>et al.</i> 1988) |
| | | <i>Photinus frontalis</i> | | | 350,560 | (Lall <i>et al.</i> 1988) |
| | | <i>Photuris lucifer</i> | <i>Photuris pyramis</i> | | 350,440,550 | (Lall <i>et al.</i> 1982) |
| | | | | | 375,560 | (Lall <i>et al.</i> 1988) |
| | | | | | 520 | (Burkhart & De LaMotte 1972) |
| | Other | Bibionidae | <i>Bibio marci</i> | | 350,490 | (Paul <i>et al.</i> 1986) |
| | | | <i>Calliphora erythrocephala</i> | | 344,490 | (Bernard & Stavenga 1979) |
| | | Caliphoridae | <i>Calliphora vicina</i> | | 480 | (McCann & Amett 1972) |
| | | | <i>Phaenicia sericata</i> | | 480 | (Bernard & Stavenga 1979) |
| | | Chloropidae | <i>Chlorops</i> sp. | | 345,370,440,480,520 | (Bernard & Stavenga 1979) |
| | | Drosophilidae | <i>Drosophila melanogaster</i> | | 480 | (Bernard & Stavenga 1979) |
| | | Ephydriidae | <i>Dimecoenia spinosa</i> | | 335,430,460,490,530 | (Hardie 1986) |
| | | Muscidae | <i>Musca domestica</i> | | 460 | (Bernard & Stavenga 1979) |
| | | Syphidae | <i>Allograpta obliqua</i> | | 450 | (Bernard & Stavenga 1979) |
| | | Eristalidae | <i>Eristalis arbustorum</i> | | | |

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|-------------|--------------------------------|-----------------|-------------------------------|
| | <i>Eristalis tenax</i> | 350,450,520 | (Horridge <i>et al.</i> 1975) |
| | <i>Syrphus sp.</i> | 440 | (Bernard & Stavenga 1979) |
| | <i>Toxomerus marginatus</i> | 450 | (Bernard & Stavenga 1979) |
| | <i>Haematopota sp.</i> | 530 | (Kirschfeld 1986) |
| Hemiptera | Notonectidae | 350,420,567 | (Bruckmoser 1968) |
| | <i>Notonecta glauca</i> | 375,475,520 | (Bennett & Ruck 1970) |
| | <i>Notonecta irrorata</i> | 375,475,520 | (Bennett & Ruck 1970) |
| | <i>Notonecta insulata</i> | 375,475,520 | (Bennett & Ruck 1970) |
| | <i>Notonecta undulata</i> | 340,412,536 | (Peitsch <i>et al.</i> 1992) |
| Hymenoptera | Andrenidae | 360,404,536,600 | (Peitsch <i>et al.</i> 1992) |
| | <i>Adrena florea</i> | 370,435,536 | (Peitsch <i>et al.</i> 1992) |
| | <i>Callonychium petuniae</i> | 348,428,528 | (Peitsch <i>et al.</i> 1992) |
| | <i>Oxae flavescens</i> | 344,436,544 | (Peitsch <i>et al.</i> 1992) |
| | <i>Anthophora acervorum</i> | 328,436,532 | (Peitsch <i>et al.</i> 1992) |
| | <i>Apis mellifera</i> (female) | 525 | (Bernard & Stavenga 1978) |
| | <i>Apis mellifera</i> (male) | 350,440,540 | (Chittka <i>et al.</i> 2001) |
| | <i>Bombus affinis</i> | 350,450 | (Bernard & Stavenga 1978) |
| | <i>Bombus distinguendis</i> | 353,436,544 | (Meyer-Rochow 1980) |
| | <i>Bombus fervidus</i> | 524 | (Peitsch <i>et al.</i> 1992) |
| | <i>Bombus hortorum</i> | 352,450 | (Bernard & Stavenga 1978) |
| | <i>Bombus hypnorum</i> | 336,432,544 | (Peitsch <i>et al.</i> 1992) |
| | <i>Bombus impatiens</i> | 332,432,544 | (Peitsch <i>et al.</i> 1992) |
| | <i>Bombus jonellus</i> | 336,440,544 | (Peitsch <i>et al.</i> 1992) |
| | <i>Bombus lapidarius</i> | 352,428,548 | (Peitsch <i>et al.</i> 1992) |
| | <i>Bombus monticola</i> | 328,428,536 | (Peitsch <i>et al.</i> 1992) |
| | <i>Bombus morio</i> | 536 | (Peitsch <i>et al.</i> 1992) |
| | <i>Bombus terrestris</i> | 336,428,540 | (Peitsch <i>et al.</i> 1992) |
| | <i>Lestradeletia limao</i> | 340,450,540 | (Peitsch <i>et al.</i> 1992) |
| | <i>Melecta punctata</i> | 356,428,520 | (Peitsch <i>et al.</i> 1992) |
| | <i>Melipona marginata</i> | 428,512 | (Peitsch <i>et al.</i> 1992) |
| | <i>Melipona quadrijasciata</i> | 347,444,521 | (Chittka <i>et al.</i> 1997) |
| | <i>Nomada alboguttata</i> | 343,440,528 | (Peitsch <i>et al.</i> 1992) |
| | <i>Partamona helleri</i> | 340,440,536 | (Peitsch <i>et al.</i> 1992) |
| | <i>Schwarziana sp.</i> | 360,428,544 | (Peitsch <i>et al.</i> 1992) |
| | <i>Trigona spinipes</i> | 340,532 | (Peitsch <i>et al.</i> 1992) |
| | <i>Xylocopa brasiliensis</i> | | (Peitsch <i>et al.</i> 1992) |
| | <i>Colletes fulgidus</i> | | |

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|----------------|-------------------------------------|-----------------|------------------------------|
| Colletidae | <i>Formica polyctena</i> | 360,510 | (Menzel & Knaut 1973) |
| Crabronidae | <i>Philanthus triangulum</i> | 344,444,524 | (Peitsch <i>et al.</i> 1992) |
| | <i>Cataglyphis bicolor</i> | 350,510 | (Paul <i>et al.</i> 1986) |
| Formicidae | <i>Anthidium manicatum</i> | 344,440,532 | (Peitsch <i>et al.</i> 1992) |
| | <i>Myrmecia gulosa</i> | 412,540 | (Lieke 1981) |
| Halictidae | <i>LasioGLOSSUM albipes</i> | 516 | (Peitsch <i>et al.</i> 1992) |
| | <i>Lasioglossum malachurum</i> | 442,528 | (Peitsch <i>et al.</i> 1992) |
| Ichneumonidae | <i>Ichneumon stramentarius</i> | 542 | (Peitsch <i>et al.</i> 1992) |
| Megachilidae | <i>Chelostoma florisonne</i> | 324,548 | (Peitsch <i>et al.</i> 1992) |
| Siricidae | <i>Urocerus gigas</i> | 436,516 | (Peitsch <i>et al.</i> 1992) |
| Sphecidae | <i>Cerceris rybnnensis</i> (female) | 524 | (Peitsch <i>et al.</i> 1992) |
| Tenthredinidae | <i>Cerceris rybnnensis</i> (male) | 344,432,560 | (Peitsch <i>et al.</i> 1992) |
| Vespidae | <i>Tenthredo campestris</i> | 328,464,540 | (Peitsch <i>et al.</i> 1992) |
| | <i>Tenthredo scrophulariae</i> | 556,604 | (Peitsch <i>et al.</i> 1992) |
| | <i>Dorlichovespula norwegica</i> | 448,524 | (Peitsch <i>et al.</i> 1992) |
| | <i>Polistes dominulus</i> | 352,452,528 | (Peitsch <i>et al.</i> 1992) |
| | <i>Vespo crabro</i> (female) | 336,436,536 | (Peitsch <i>et al.</i> 1992) |
| | <i>Vespo crabro</i> (male) | 542 | (Peitsch <i>et al.</i> 1992) |
| | <i>Vespula germanica</i> | 336,432,544 | (Peitsch <i>et al.</i> 1992) |
| | <i>Vespula vulgaris</i> | 336,432,536 | (Peitsch <i>et al.</i> 1992) |
| Xiphydriidae | <i>Xiphydria camelus</i> | 542 | (Peitsch <i>et al.</i> 1992) |
| Epicopeiidae | <i>Epicopeia hainesii</i> | 380,420,500 | (Eguchi <i>et al.</i> 1982) |
| Geometridae | <i>Arichanna gaschkevitchii</i> | 360,500,540 | (Eguchi <i>et al.</i> 1982) |
| Hepialidae | <i>Phassus excrescens</i> | 380,460,520,580 | (Eguchi <i>et al.</i> 1982) |
| Hesperiidae | <i>Ochlodes venata</i> | 380,460,520 | (Eguchi <i>et al.</i> 1982) |
| | <i>Parnara guttata</i> | 380,460,520 | (Eguchi <i>et al.</i> 1982) |
| Lycenidae | <i>Celastrina argiolus</i> | 380,440,560 | (Eguchi <i>et al.</i> 1982) |
| | <i>Lycaena dorcas</i> | 360,437,500,568 | (Bernard & Remington 1991) |
| | <i>Lycaena heteronea</i> | 360,437,500,568 | (Bernard & Remington 1991) |
| | <i>Lycaena nivalis</i> | 361,438,501,575 | (Bernard & Remington 1991) |
| | <i>Lycaena phlaeas</i> | 400,540,600 | (Eguchi <i>et al.</i> 1982) |
| | <i>Lycaena rubidus</i> | 360,437,500,568 | (Bernard & Remington 1991) |
| | <i>Pseudozizeeria maha</i> | 400,520,580 | (Eguchi <i>et al.</i> 1982) |

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|--------------|-------------------------------|---------------------|---|
| Noctuidae | <i>Anadevidia peponis</i> | 420,460,500 | (Eguchi <i>et al.</i> 1982) |
| | <i>Mamestra brassicae</i> | 360,460,540,580 | (Ichikawa & Tateda 1982) |
| | <i>Spodoptera exempta</i> | 355,465,515,560 | (Langer <i>et al.</i> 1979) |
| Nymphalidae | <i>Aglais urticae</i> | 380,460,530 | (Steiner <i>et al.</i> 1987) |
| | <i>Argynnis rustana</i> | 380,440,560,620 | (Eguchi <i>et al.</i> 1982) |
| | <i>Fabriciana adippe</i> | 380,460,520,580 | (Eguchi <i>et al.</i> 1982) |
| | <i>Heliconius erato</i> | 370,470,570 | (Weller & Pashley 1995) |
| | <i>Heliconius numata</i> | 390,460,540 | (Struwe 1972b, a) |
| | <i>Heliconius sara</i> | 370,470,550 | (Struwe 1972b) |
| | <i>Minois dryas</i> | 380,460,520 | (Eguchi <i>et al.</i> 1982) |
| | <i>Neope goschkevitschii</i> | 380,460,520 | (Eguchi <i>et al.</i> 1982) |
| | <i>Nymphalis xanthomelas</i> | 380,460,500,560 | (Eguchi <i>et al.</i> 1982) |
| | <i>Pararge aegeria</i> | 360,460,530 | (Paul <i>et al.</i> 1986) |
| Papilionidae | <i>Polygonia c-album</i> | 380,520,560,620 | (Eguchi <i>et al.</i> 1982) |
| | <i>Vanessa cardui</i> | 360,470,530 | (Bernard 1979; Briscoe <i>et al.</i> 2003) |
| | <i>Atrophaneura alcinous</i> | 420,460,520,600 | (Eguchi <i>et al.</i> 1982) |
| | <i>Graphium sarpedon</i> | 380,460,560,600 | (Eguchi <i>et al.</i> 1982) |
| | <i>Papilio aegeus</i> | 360,450,540,610 | (Matic 1983) |
| | <i>Papilio bianor</i> | 420,460,520,580 | (Eguchi <i>et al.</i> 1982) |
| | <i>Papilio maackii</i> | 380,460,520,580 | (Eguchi <i>et al.</i> 1982) |
| | <i>Papilio machaon</i> | 380,460,520,580 | (Eguchi <i>et al.</i> 1982) |
| | <i>Papilio protenor</i> | 420,460,520 | (Eguchi <i>et al.</i> 1982) |
| | <i>Papilio xuthus</i> | 360,390,490,520,600 | (Eguchi <i>et al.</i> 1982; Arikawa <i>et al.</i> 1987) |
| Pieridae | <i>Colias erate</i> | 400,520,560 | (Eguchi <i>et al.</i> 1982) |
| | <i>Gonepteryx aspasia</i> | 380,460,560,600 | (Eguchi <i>et al.</i> 1982) |
| | <i>Pieris brassicae</i> | 360,455,560,620 | (Paul <i>et al.</i> 1986; Steiner <i>et al.</i> 1987) |
| | <i>Pieris melete</i> | 400,480,540,600 | (Eguchi <i>et al.</i> 1982) |
| Pyralidae | <i>Pieris rapae</i> | 340,450,540,600 | (Bernard & Stavenga 1979; Ichikawa & Tateda 1982) |
| | <i>Amyelois transitella</i> | 350,430,530 | (Eguchi <i>et al.</i> 1982; Bernard <i>et al.</i> 1984) |
| | <i>Galleria mellonella</i> | 510 | (Goldman <i>et al.</i> 1975) |
| Saturniidae | <i>Actias artemis aliena</i> | 380,460,540,580 | (Eguchi <i>et al.</i> 1982) |
| | <i>Antheraea polyphemus</i> | 360,450,525 | (Langer <i>et al.</i> 1986) |
| Sphingidae | <i>Saia cynthia ricini</i> | 380,400,480,520,540 | (Eguchi <i>et al.</i> 1982) |
| | <i>Ampelophaga rubiginosa</i> | 460,540,580 | (Eguchi <i>et al.</i> 1982) |

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|---------------------------------|---------------|-----------------------------------|---------------------------------|--|
| <i>Callambulyx tatarinovii</i> | | | 380,460,540,580 | (Eguchi <i>et al.</i> 1982) |
| <i>Deilephila elpenor</i> | | | 345,440,520 | (Hamdorf <i>et al.</i> 1971; Hoglund <i>et al.</i> 1973; Schwener & Paulsen 1973; Schlecht 1979) |
| <i>Macroglossum stellatarum</i> | | | 348,430,500 | (Hasselmann 1962) |
| <i>Manduca sexta</i> | | | 345,440,525 | (White <i>et al.</i> 1983) |
| <i>Marumba sperchioides</i> | | | 460,540,600 | (Eguchi <i>et al.</i> 1982) |
| Neuroptera | Ascalaphidae | <i>Lubelloides macaronius</i> | 350,530 | (Gogala 1967; Paul <i>et al.</i> 1986) |
| | | <i>Aeshna cyanea</i> | 356,420,519 | (Autrum & Kolb 1968) |
| Odonata | Aeshnidae | <i>Aeschna tuberculifera</i> | 358,501 | (Chappell & DeVoe 1975) |
| | | <i>Anax junius</i> | 354,442,503 | (Chappell & DeVoe 1975) |
| Orthoptera | Corduliidae | <i>Lubellula pulchella</i> | 360,500 | (Meinertzhagen <i>et al.</i> 1983) |
| | | <i>Hemicordulia tau</i> | 330,410,460,525,630 | (Vishnevskaya & Shura-Bura 1990) |
| | Libellulidae | <i>Sympetrum rubicundulum</i> | 340,410,490,540,620 | (Zufall <i>et al.</i> 1989) |
| | | <i>Locusta migratoria</i> | 360,430,530 | (Zufall <i>et al.</i> 1989) |
| | Acrididae | <i>Gryllus bimaculatus</i> | 332,445,515 | |
| | | <i>Gryllus campestris</i> | 340,439,520 | |
| | Blattidae | <i>Romalea microptera</i> | 360,510 | |
| | | <i>Anas platyrhynchos</i> | 415,452,506,567(C,446,51,561)a | (Bruckler & Williams 1981) |
| | Romaleidae | <i>Coturnix coturnix japonica</i> | 418,450,505,567(C,446,51,566)a | (Jane & Bownmaker 1988; Hart & Vorobyev 2005) |
| | | <i>Gallus gallus</i> | 418,453,507,571(C,443,50,561)a | (Bownmaker <i>et al.</i> 1993; Hart & Vorobyev 2005) |
| | Anatidae | <i>Pavo cristatus</i> | 424,458,505,567(C,449,51,569)a | (Bownmaker <i>et al.</i> 1997; Hart & Vorobyev 2005) |
| | | <i>Amadina fasciata</i> | 370,447,500,563(C,423,51,575)a | (Hart <i>et al.</i> 2002; Hart & Vorobyev 2005) |
| | Phasianidae | <i>Cyanistes caeruleus</i> | 372,449,502,563(C,413,508,573)a | (Hart <i>et al.</i> 2000a; Hart & Vorobyev 2005) |
| | | <i>Erythrura gouldiae</i> | 370,440,500,562(C,422,51,572)a | (Hart <i>et al.</i> 2000a; Hart & Vorobyev 2005) |
| | Passeroidea | <i>Lonchura maja</i> | 373,446,500,562(C,422,51,567)a | (Hart <i>et al.</i> 2000a; Hart & Vorobyev 2005) |
| | | <i>Neochmia modesta</i> | 373,442,500,565(C,415,51,568)a | (Das <i>et al.</i> 1999; Hart & Vorobyev 2005) |
| | Passeriformes | <i>Serinus canaria</i> | 363,440,501,567(C,414,506,578)a | (Hart <i>et al.</i> 1998; Hart & Vorobyev 2005) |
| | | <i>Sturnus vulgaris</i> | 362,449,504,563(C,399,51,573)a | (Maier & Bownmaker 1993; Hart & Vorobyev 2005) |
| | Timaliidae | <i>Leiothrix lutea</i> | 355,454,499,568(C,392,506,566)a | (Hart <i>et al.</i> 2000b; Hart & Vorobyev 2005) |
| | | <i>Turdus merula</i> | 373,454,504,557(C,414,51,570)a | |

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|-------------------|----------------|---|---------------------------------|---|
| Procellariiformes | Procellariidae | <i>Puffinus pacificus</i> | 406,450,503,566(C.445,506,562)a | (Hart 2004; Hart & Vorobyev 2005) |
| Psittaciformes | Psittacidae | <i>Melopsittacus undulatus</i> | 371,440,499,566(C.411,507,566)a | (Bowmaker <i>et al.</i> 1997; Hart & Vorobyev 2005) |
| Struthioniformes | Struthionidae | <i>Struthio camelus</i> | 405,445,506,570(C.417,506,552)a | (Wright & Bowmaker 2001; Hart & Vorobyev 2005) |
| Mammalia | Ariodactyla | <i>Bos taurus</i> | 455,554 | (Jacobs <i>et al.</i> 1998) |
| | | <i>Capra hircus</i> | 444,552 | (Jacobs <i>et al.</i> 1998) |
| | | <i>Ovis aries</i> | 446,552 | (Jacobs <i>et al.</i> 1998) |
| | Cervidae | <i>Dama dama</i> | 453,542 | (Jacobs <i>et al.</i> 1994) |
| | | <i>Odocoileus virginianus</i> | 457,537 | (Jacobs <i>et al.</i> 1994) |
| | Suidae | <i>Sus scrofa</i> | 439,556 | (Neitz & Jacobs 1989) |
| Carnivora | Canidae | <i>Canis lupus familiaris</i> | 431,555 | (Jacobs <i>et al.</i> 1993b) |
| | | <i>Urocyon littoralis</i> | 432,555 | (Jacobs <i>et al.</i> 1993b) |
| | | <i>Vulpes vulpes</i> | 438,555 | (Jacobs <i>et al.</i> 1993b) |
| | Felidae | <i>Felis catus</i> | 450,555 | (Crocker <i>et al.</i> 1980; Jacobs & Neitz 1986) |
| | Mustelidae | <i>Mustela putorius furo</i> | 430,558 | (Calderone & Jacobs 2003) |
| | Procyonidae | <i>Nasua nasua</i> | 430,555 | (Jacobs & Deegan 1992) |
| | | <i>Potos flavus</i> | 555 | (Jacobs & Deegan 1992) |
| | | <i>Procyon lotor</i> | 560 | (Jacobs & Deegan 1992) |
| Didelphimorphia | Didelphidae | <i>Didelphis virginiana</i> | 562 | (Jacobs & Williams 2010) |
| Lagomorpha | Leporidae | <i>Oryctolagus cuniculus</i> | 425,523 | (Nuboer <i>et al.</i> 1983) |
| Perissodactyla | Equidae | <i>Equus caballus</i> | 428,539 | (Carroll <i>et al.</i> 2001) |
| Primates | Aotidae | <i>Aotus trivirgatus</i> | 543 | (Jacobs <i>et al.</i> 1993a) |
| | Cebidae | <i>Callithrix jacchus jacchus</i> (trichromat) | 423,548,564 | (Travis <i>et al.</i> 1988; Tovée <i>et al.</i> 1992) |
| | | <i>Callithrix jacchus jacchus</i> (dichromat) | 423,558 | (Travis <i>et al.</i> 1988; Tovée <i>et al.</i> 1992) |
| | | <i>Cebus spp.</i> (trichromat) | 426,537,563 | (Jacobs & Deegan 2003) |
| | | <i>Cebus spp.</i> (dichromat) | 426,550 | (Jacobs & Deegan 2003) |
| | | <i>Leontopithecus rosalia rosalia</i> (trichromat) | 430,548,561 | (Jacobs & Deegan 2003) |
| | | <i>Leontopithecus rosalia rosalia</i> (dichromat) | 430,557 | (Jacobs & Deegan 2003) |
| | | <i>Saguinus fuscicollis</i> (trichromat) | 440,540,590 | (Jacobs <i>et al.</i> 1987) |
| | | <i>Saguinus fuscicollis</i> (dichromat) | 445,549 | (Jacobs <i>et al.</i> 1987) |
| | | <i>Saguinus midas</i> (dichromat) | 428,550 | (Jacobs & Deegan 2003) |
| | | <i>Saguinus oedipus</i> (trichromat) | 428,546,555 | (Jacobs & Deegan 2003) |
| | | <i>Saguinus oedipus</i> (dichromat) | 428,551 | (Jacobs & Deegan 2003) |

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| | <i>Saimiri sciureus</i> (trichromat) | 434,550,558 | (Jacobs & Neitz 1987) |
| | <i>Saimiri sciureus</i> (dichromat) | 434,551 | (Jacobs & Neitz 1987) |
| Cercopithecidae | <i>Cercopithecus cebus</i> | 432,533,565 | (Bowmaker <i>et al.</i> 1991) |
| | <i>Cercopithecus diana</i> | 432,531,566 | (Bowmaker <i>et al.</i> 1991) |
| | <i>Cercopithecus pettaurista</i> | 424,534,563 | (Bowmaker <i>et al.</i> 1991) |
| | <i>Chlorocebus aethiops</i> | 434,535,566 | (Bowmaker <i>et al.</i> 1991) |
| | <i>Erythrocebus patas</i> | 432,533,566 | (Bowmaker <i>et al.</i> 1991) |
| | <i>Macaca fascicularis</i> | 430,531,561 | (Baylor <i>et al.</i> 1984, 1987) |
| | <i>Macaca mulatta</i> | 434,536,562 | (Bowmaker <i>et al.</i> 1991) |
| | <i>Miopithecus talapoin</i> | 429,533,564 | (Bowmaker <i>et al.</i> 1991) |
| | <i>Papio papio</i> | 431,536,564 | (Bowmaker <i>et al.</i> 1991) |
| Hominidae | <i>Homo sapiens</i> | 419,531,558 | (Dartnall <i>et al.</i> 1983) |
| Lemuridae | <i>Eulemur fulvus fulvus</i> | 437,545 | (Jacobs & Deegan 1993) |
| | <i>Lemur catta</i> | 437,545 | (Jacobs & Deegan 1993) |
| Pitheciidae | <i>Pithecia pithecia</i> (trichromat) | 428,537,563 | (Jacobs & Deegan 2003) |
| | <i>Pithecia pithecia</i> (dichromat) | 428,565 | (Jacobs & Deegan 2003) |
| Proboscidea | <i>Elephantidae</i> | 419,552 | (Yokoyama <i>et al.</i> 2005) |
| | <i>Elephas maximus</i> | 419,552 | (Yokoyama <i>et al.</i> 2005) |
| Rodentia | <i>Caviidae</i> | 400,530 | (Parry & Bowmaker 2002) |
| | <i>Cavia porcellus</i> | 508 | (Calderone & Jacobs 1999; Williams & Jacobs 2008) |
| | <i>Mesocricetus auratus</i> | 506 | (Williams & Jacobs 2008) |
| | <i>Mesocricetus brandti</i> | 360,500 | (Calderone & Jacobs 1999; Williams & Jacobs 2008) |
| Geomyidae | <i>Thomomys bottae</i> | 367,505 | (Williams <i>et al.</i> 2005) |
| Muridae | <i>Meriones unguiculatus</i> | 360,493 | (Jacobs <i>et al.</i> 1991; Jacobs & Deegan II 1994) |
| | <i>Mus musculus</i> | 359,511 | (Jacobs <i>et al.</i> 1991) |
| | <i>Rattus norvegicus</i> | 359,511 | (Jacobs <i>et al.</i> 1991) |
| Sciruidae | <i>Sciurus carolinensis</i> | 444,543 | (Blakeslee <i>et al.</i> 1988) |
| | <i>Spermophilus beecheyi</i> | 437,519 | (Jacobs <i>et al.</i> 1985) |
| | <i>Spermophilus lateralis</i> | 435,520 | (Kraft 1988) |
| | <i>Spermophilus tridecemlineatus</i> | 437,517 | (Jacobs <i>et al.</i> 1985) |
| Scandentia | <i>Tupaia glis</i> | 445,555 | (Bowmaker <i>et al.</i> 1991) |
| Squamata | <i>Agamidae</i> | 440,493,571 _{(470,470,470)a} | (Barbour <i>et al.</i> 2002) |
| Reptilia ² | <i>Chamaeleonidae</i> | 383,444,481,499,568,586,605 _{(c,390,493,493,486,486,486)ab} | (Bowmaker <i>et al.</i> 2005) |

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|------------|-------------------------------------|---|-----------------------------------|
| | <i>Furcifer pardalis</i> | 375,444,490,559,575,604 _{(C,390,493,495,486,486,487)a} | (Bowmaker <i>et al.</i> 2005) |
| Colubridae | <i>Boa constrictor</i> | 357,549 _(C,C) | (Sillman <i>et al.</i> 2001) |
| | <i>Masticophis flagellum</i> | 362,457,558 _(C,C,C) | (Macedonia <i>et al.</i> 2009) |
| | <i>Python regius</i> | 360,551 _(C,C) | (Davies <i>et al.</i> 2009) |
| | <i>Thamnophis sirtalis sirtalis</i> | 358,481,554 _(C,C,C) | (Sillman <i>et al.</i> 1997) |
| Gekkonidae | <i>Xenopeltis unicolor</i> | 361,550 _(C,C) | (Davies <i>et al.</i> 2009) |
| | <i>Cyrtopodion caspium</i> | 365,534,452 _(C,C,C) | (Govardovskii <i>et al.</i> 1984) |
| | <i>Cyrtopodion fedtschenkoi</i> | 365,535,451 _(C,C,C) | (Govardovskii <i>et al.</i> 1984) |
| | <i>Cyrtopodion kotschy</i> | 365,537,460 _(C,C,C) | (Govardovskii <i>et al.</i> 1984) |
| | <i>Gekko gecko</i> | 364,467,521 _(C,C,C) | (Loew 1994) |
| | <i>Hemidactylus frenatus</i> | 365,520,466 _(C,C,C) | (Crescitelli <i>et al.</i> 1977) |
| | <i>Hemidactylus garnotii</i> | 363,464,521 _(C,C,C) | (Loew <i>et al.</i> 1996) |
| | <i>Hemidactylus platyurus</i> | 365,527,465 _(C,C,C) | (Crescitelli <i>et al.</i> 1977) |
| | <i>Hemidactylus turcicus</i> | 366,467,526 _(C,C,C) | (Crescitelli <i>et al.</i> 1977) |
| | <i>Ptychozoon lionotum</i> | 365,523,470 _(C,C,C) | (Loew <i>et al.</i> 1996) |
| Iguanidae | <i>Teratoscincus scincus</i> | 365,452,533 _(C,C,C) | (Loew <i>et al.</i> 2002) |
| | <i>Anolis bahorucoensis</i> | 365,450,500,569 _{(C,397,450,500)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis conspersus</i> | 365,460,500,562 _{(C,368,475,515)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis cristatellus</i> | 365,458,492,562 _{(C,371,465,507)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis evermanni</i> | 364,460,490,565 _{(C,380,500,515)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis extremus</i> | 365,451,487,566 _{(C,393,442,488)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis grahami</i> | 365,460,495,565 _{(C,382,451,505)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis gundlachi</i> | 365,450,490,564 _{(C,370,450,510)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis krugi</i> | 365,448,490,562 _{(C,370,480,500)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis lineatopus</i> | 366,449,498,560 _{(C,367,451,486)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis pulchellus</i> | 367,446,495,565 _{(C,390,475,505)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis sagrei</i> | 365,460,495,567 _{(C,376,475,510)a} | (Loew <i>et al.</i> 2002) |
| | <i>Anolis stratulus</i> | 366,454,494,564 _{(C,388,467,495)a} | (Loew <i>et al.</i> 2002) |
| | <i>Crotaphytus dickersonae</i> | 359,459,481,558 _{(C,373,521,489)a} | (Macedonia <i>et al.</i> 2009) |
| | <i>Platyceps broadleyi</i> | 364,451,492,570,569 _{(C,380,518,476)b} | (Fleishman <i>et al.</i> 2011) |

Species omitted from the analysis are underlined.¹ Values in parenthesis provide the wavelengths of λ_{cut} (a) or λ_{mid} (b) of the oil droplets contained within the photoreceptors of some reptiles and birds. These values were used to adjust the visual pigment absorbance curves for oil droplet transmittance prior to deriving the minimum and maximum wavelengths of half maximum absorbance($\min \lambda_{0.5}$ and $\max \lambda_{0.5}$). ‘C’ denotes oil droplets which are clear and do not affect the transmittance of light to the visual pigment. Reference sources are provided below.

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