

Part II. List of Other Arthropod Pheromones and Allomones

Update: Feb. 2, 2025

(B) Non-terpene Methyl-branched Compounds

These semiochemicals are divided into the following six groups and listed in ascending order of carbon chain length or ring size.

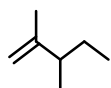
[B-1]	Me-branched hydrocarbons	i – v	(91 compounds)
[B-2]	Me-branched 1° OH & derivatives	i, ii	(42 compounds)
[B-3]	Me-branched 2° OH & esters	i, ii	(40 compounds)
[B-4]	Me-branched ketones	i, iii	(56 compounds)
[B-5]	Me-branched acids & derivatives	i – iii	(65 compounds)
[B-6]	Me-branched ring compounds	I – iii	(40 compounds)

See the database, <https://lepipheromone.sakura.ne.jp/mepdb.html>,
for more information, such as the IUPAC names, arthropod species names,
and research publications

Lepidopteran female sex pheromones and male attractants are listed in **Part I**.
Other arthropod pheromones and allomones are listed in **Part II**,
which is composed of **(A)** terpenoid compounds without alkaloids,
(B) non-terpene methyl-branched compounds, and **(C)** other compounds
including terpene alkaloids.

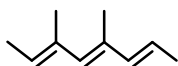
[B-1] Me-branched hydrocarbons (i)

C5 chain



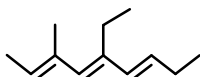
true bug
(alarm phe.)

C8 chain



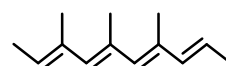
sap beetle
(M aggregation phe.)

C9 chain

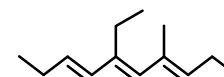


sap beetle (M aggregation phe.)

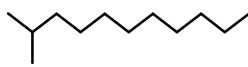
C10 chain



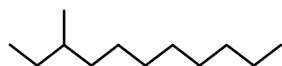
sap beetle (M aggregation phe.)



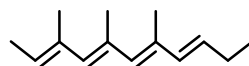
C11 chain



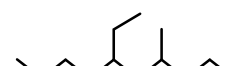
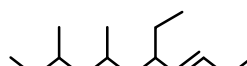
termite (trail phe.?)



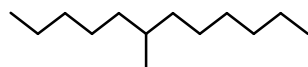
ant (gland secretion)



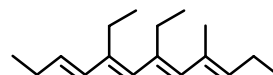
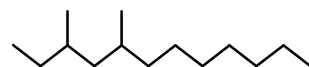
sap beetle (M aggregation phe.)



C12 chain

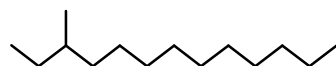


ant (gland secretion)

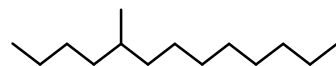


sap beetle
(M aggregation phe.)

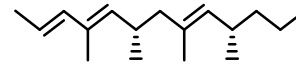
C13 chain



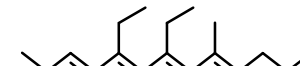
ant (gland secretion)



parasitoid wasp (F sex phe.)

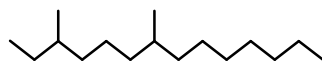


wasp (F sex phe.)



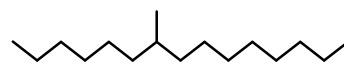
sap beetle
(M aggregation phe.)

C14 chain

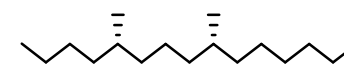
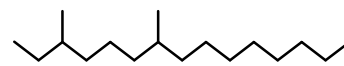


leafminer moth
(F sex phe.)

C15 chain

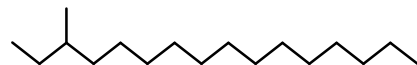


leafminer moth (F sex phe.)



leafminer moth
(F sex phe.)

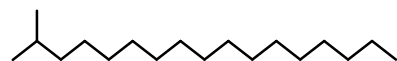
C16 chain



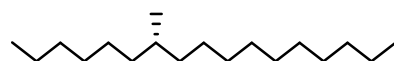
ant (gland secretion)

[B-1] Me-branched hydrocarbons (ii)

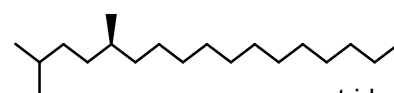
C17 chain



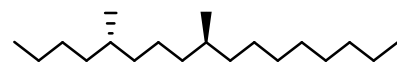
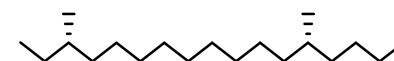
tiger moth, scarab
(F sex phe.)



noctuid moth, geometrid moth
(F sex phe.)



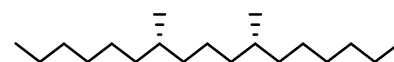
geometrid moth (F sex phe.)



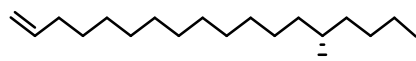
leafminer moth (F sex phe.)



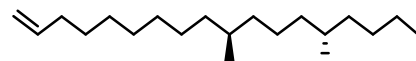
geometrid moth (F sex phe.)



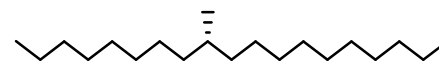
C18 chain



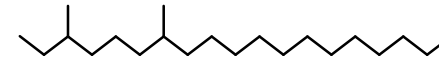
leafminer moth (F sex phe.)



C19 chain

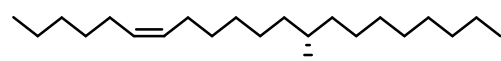


noctuid moth (F sex phe.)

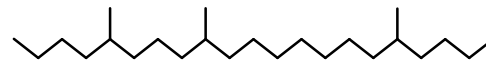


leafminer fly (F sex phe.)

C21 chain

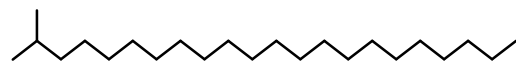


noctuid moth (F sex phe.)

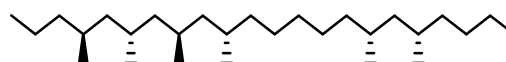


true bug (M sex phe.)

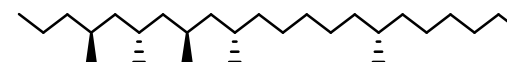
C22 chain



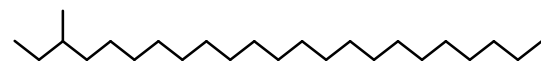
biting midge, longhorn beetle (F sex phe.)
leaf beetle (M sex phe. ?)



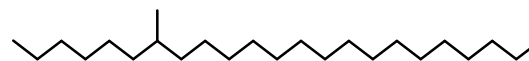
scarab beetle (F cuticular HC)



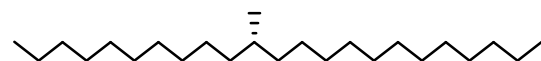
C23 chain



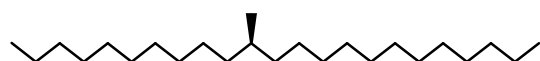
cockroach (cuticular HC)
jewel beetle (F sex phe.)



thrip (M sex phe.)

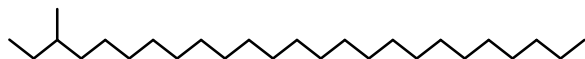


cockroach (cuticular HC), gelechiid moth (F sex phe.)

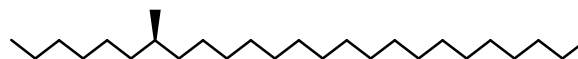


[B-1] Me-branched hydrocarbons (iii)

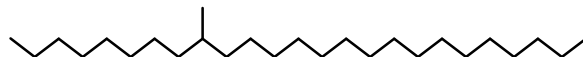
C25 chain



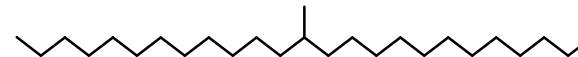
ant (queen phe.), longhorn beetle (F sex phe.)



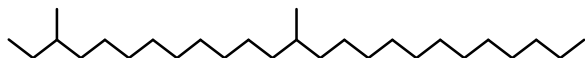
longhorn beetle (F sex phe.), leaf beetle, ant, etc.



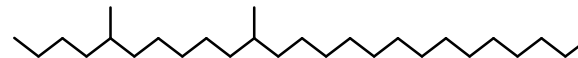
longhorn beetle, jewel beetle (F sex phe.)



cockroach (cuticle)

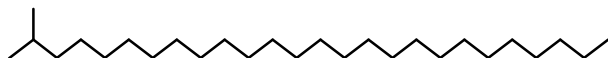


longhorn beetle (F sex phe.)



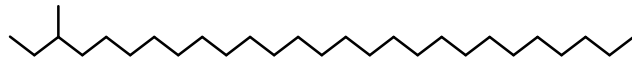
pyralid moth (M sex phe.)

C26 chain

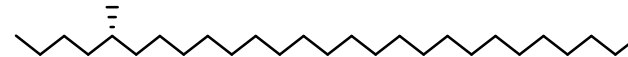


longhorn beetle (F sex phe.)

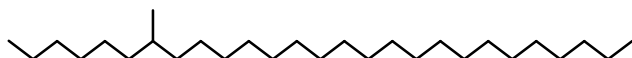
C27 chain



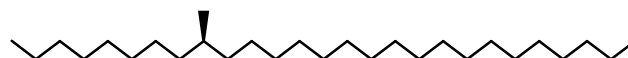
ant (queen phe.)



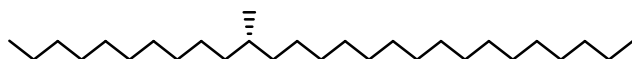
termite (allomone ?), parasitoid wasp (M sex phe.)



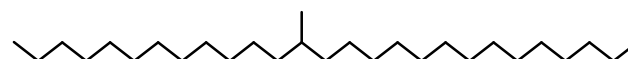
longhorn beetle (F sex phe.), leaf beetle, ant, etc.



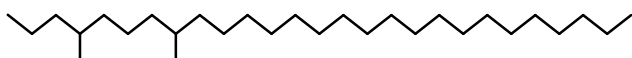
longhorn beetle (F sex phe.), leaf beetle, ant, etc.



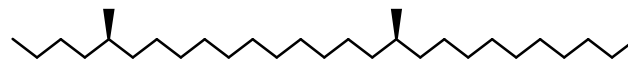
longhorn beetle, leaf beetle (F sex phe.)



butterfly (M aphrodisiac phe.), psylla (F sex phe.)

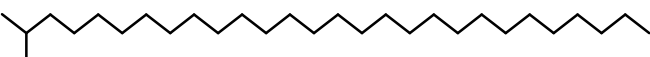


stable fly (M sex phe.)



parasitoid wasp (M sex phe.)

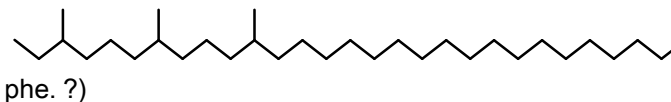
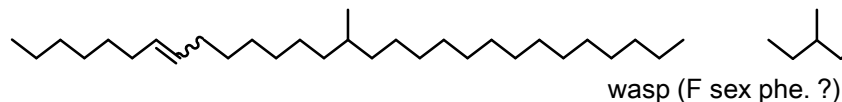
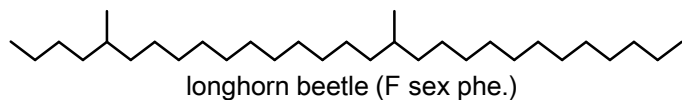
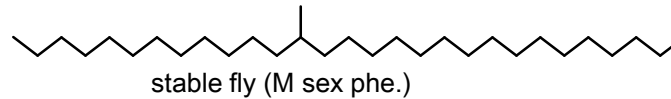
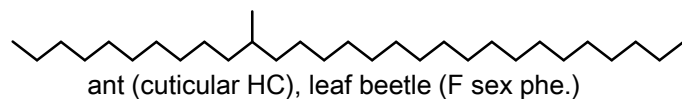
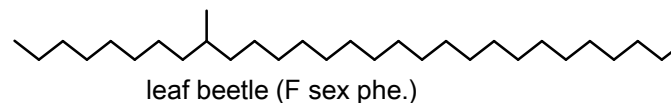
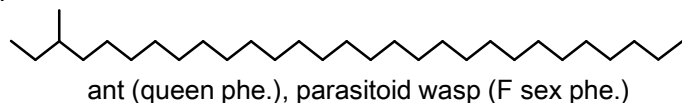
C28 chain



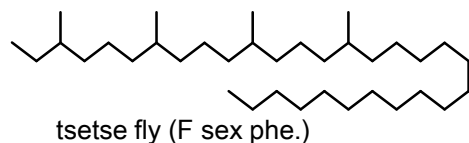
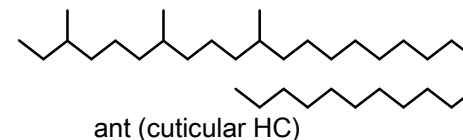
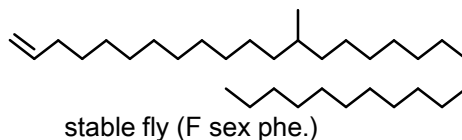
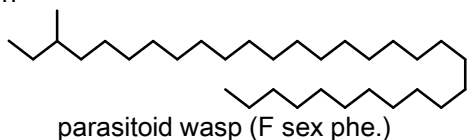
fruit fly, longhorned beetle (F sex phe.)

[B-1] Me-branched hydrocarbons (iv)

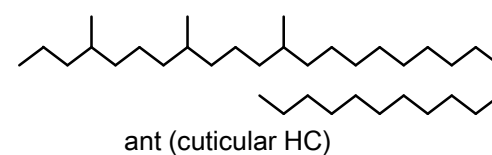
C29 chain



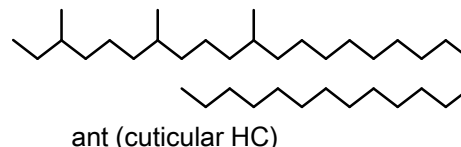
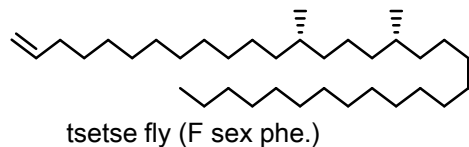
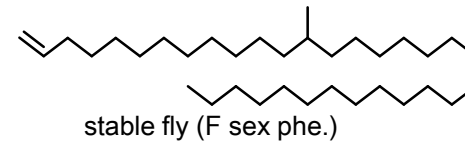
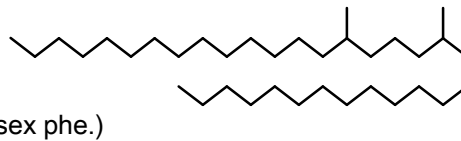
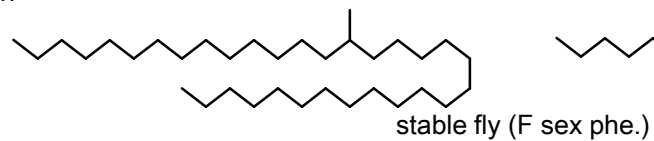
C31 chain



C32 chain

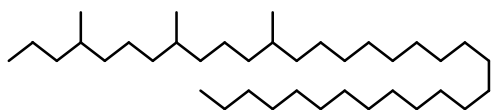


C33 chain



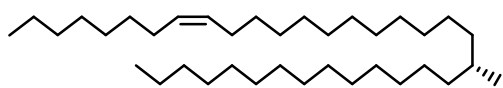
[B-1] Me-branched hydrocarbons (v)

C34 chain

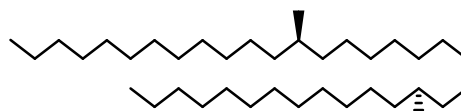


ant (cuticular HC)

C35 chain



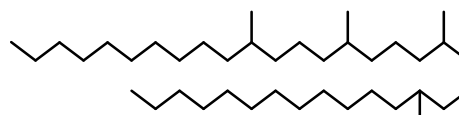
longhorn beetle (F sex phe.)



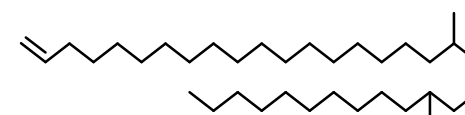
tsetse fly (F sex phe.)



stick insect (F cuticul)

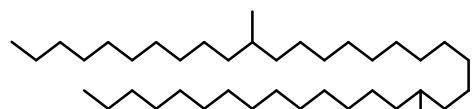


tsetse fly (F sex phe.)

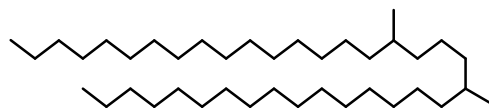


tsetse fly (M anti-aphrodisiac phe.)

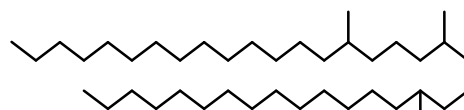
C37 chain



tsetse fly (F sex phe.)

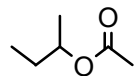


tsetse fly (F sex phe.)



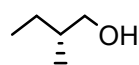
[B-2] Me-branched 1° OH & derivative (i)

C3 chain

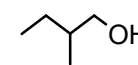


scarab beetle
(M aggregation phe.)

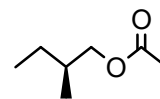
C4 chain



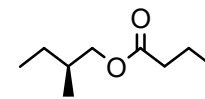
longhorn beetle (M aggregation phe.)
assassin bug (F sex phe.)



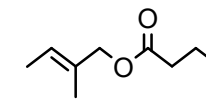
termite
(primer phe.)



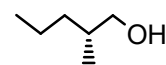
stink bug (gland secretion)



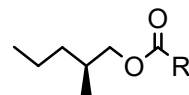
broad-headed bug
(F aggregation phe.)



C5 chain



longhorn beetle
(M aggregation phe.)

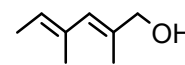


acarid mite
(gland secretion)

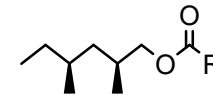
C6 chain



ant (gland secretion)

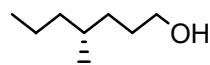


harvestman
(allomone ?)

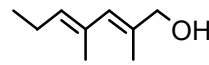


acarid mite
(gland secretion)

C7 chain

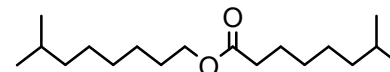


assassin bug
(F sex phe.)

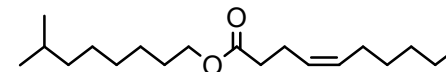


harvestman
(allomone ?)

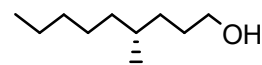
C8 chain



click beetle (F sex phe.)

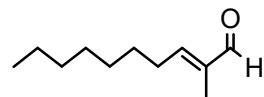


C9 chain

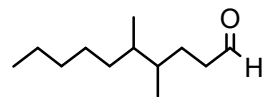


darkling beetle (F sex phe.)

C10 chain

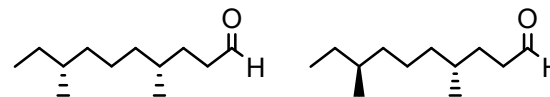


ant
(gland secretion)

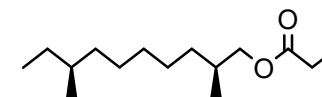


darkling beetle
(M aggregation phe.)

tribolure



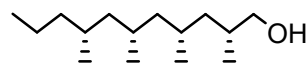
darkling beetle (aggregation phe.)



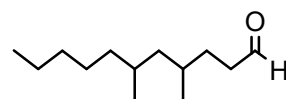
wasp (F sex phe.)

C11 chain

prieskanol



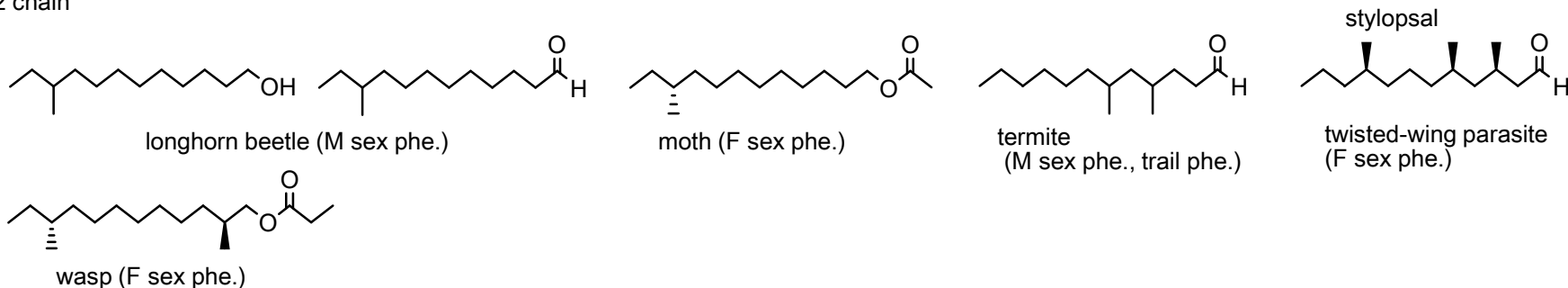
scale (F sex phe.)



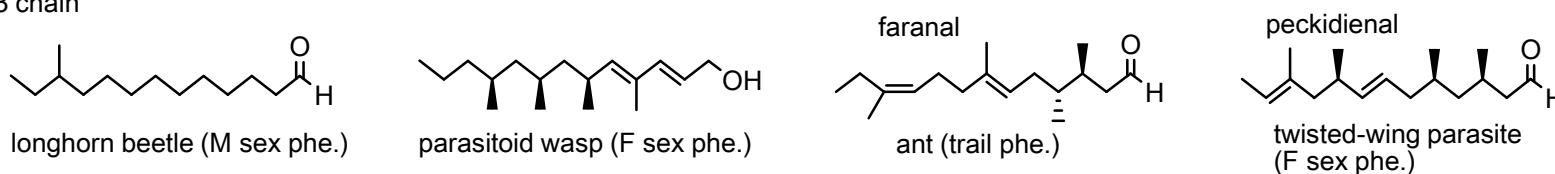
termite
(M sex phe., trail phe.)

[B-2] Me-branched 1° OH & derivative (ii)

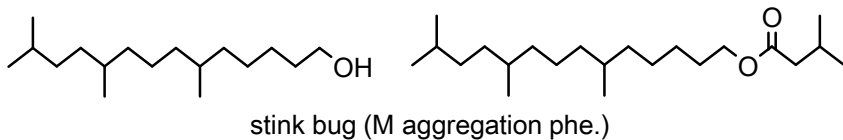
C12 chain



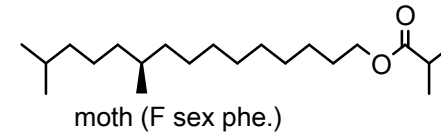
C13 chain



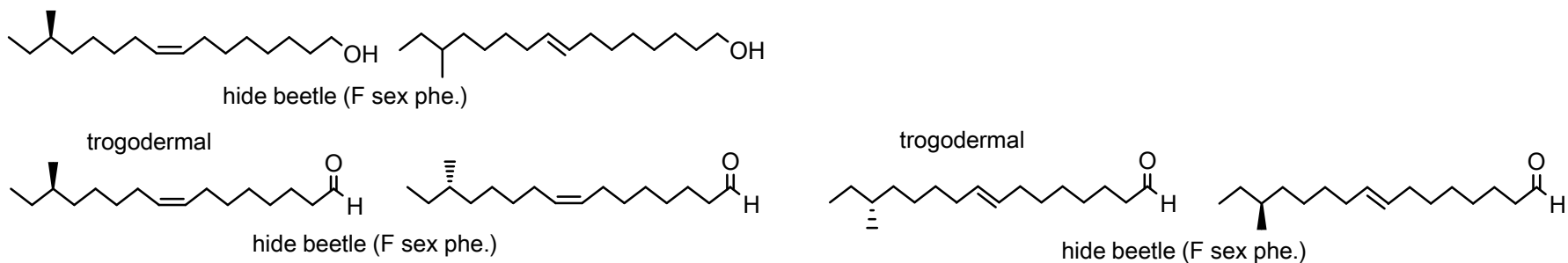
C14 chain



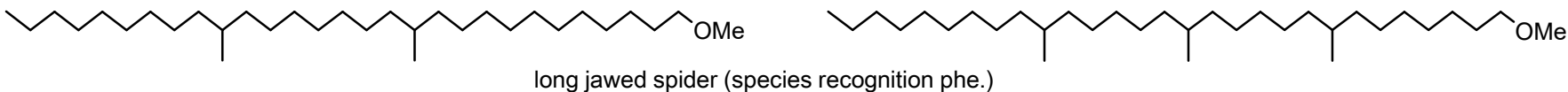
C15 chain



C16 chain

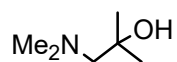


C29 chain



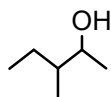
[B-3] Me-branched 2° OH & esters (i)

C3 chain



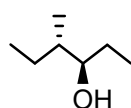
cockroach
(aggregation phe.)

C5 chain

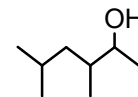
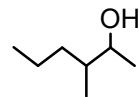


ant (gland secretion)

C6 chain

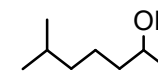


ant (gland secretion)



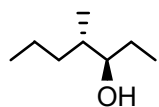
assassin bug
(sex phe.)

C7 chain

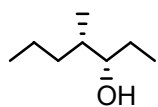


assassin bug
(alarm phe. ?)

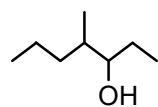
C7 chain



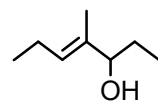
ant (trail phe., alarm phe.)
bark beetle (aggregation phe.)



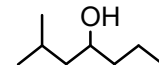
bark beetle
(aggregation phe.)



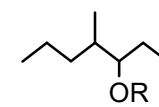
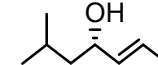
ant (alarm phe.)
harvestman (allomone)



harvestman
(allomone ?)

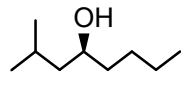
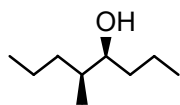
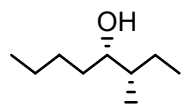


weevil (aggregation phe.)



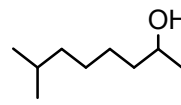
ant
(gland secretion)

C8 chain

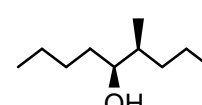


weevil (M aggregation phe.)

C9 chain

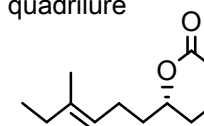


harvestman
(allomone ?)



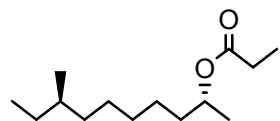
weevil
(M aggregation phe.)

quadrilure



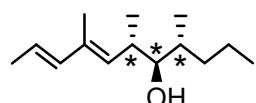
flat bark beetle
(M aggregatin phe.)

C10 chain

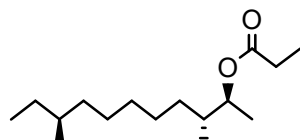


leaf beetle (F sex phe.)

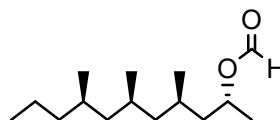
C11 chain



cockroach
(F sex phe.)

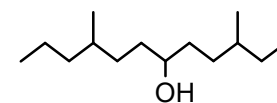


sawfly (F sex phe.)



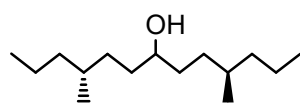
acarid mite
(aggregation phe.)

C12 chain

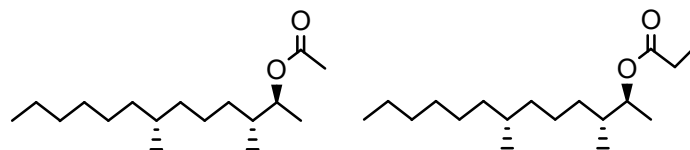


ant (trail phe.)

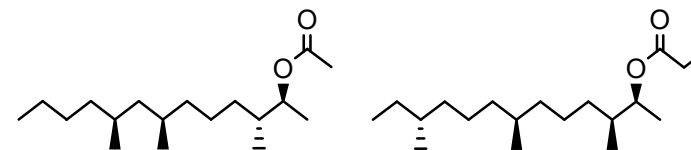
C13 chain



ant (trail phe.)



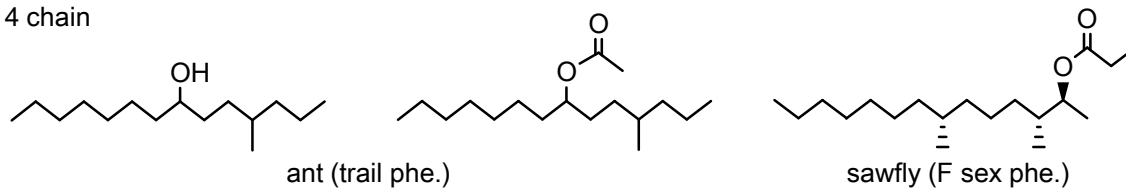
sawfly (F sex phe.)



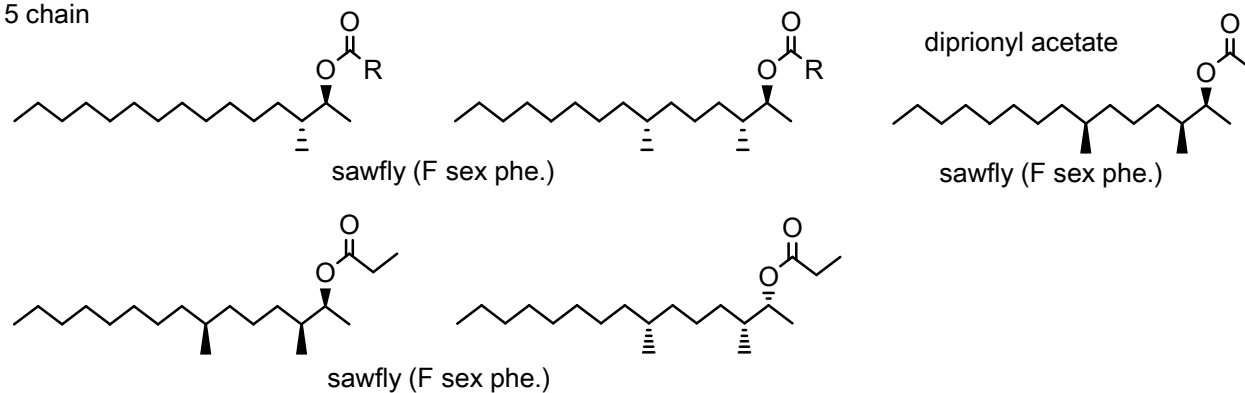
sawfly (F sex phe.)

[B-3] Me-branched 2° OH & esters (ii)

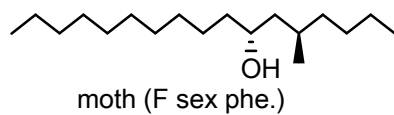
C14 chain



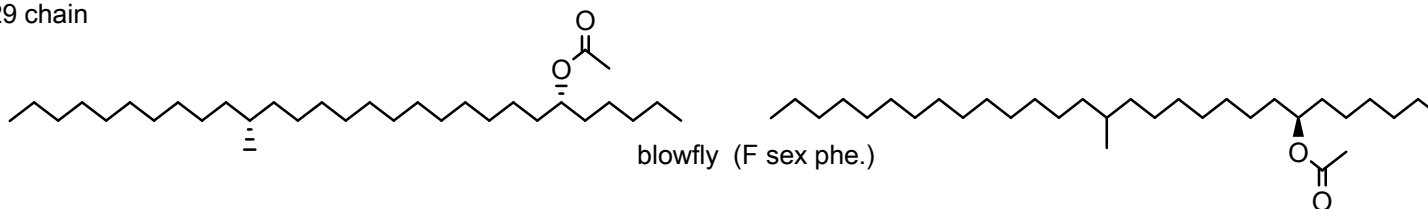
C15 chain



C17 chain

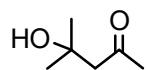


C29 chain



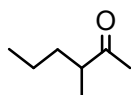
[B-4] Me-branched ketones (i)

C5 chain

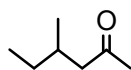


ant (alarm phe.)
water strider
(M sex phe.?)

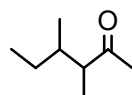
C6 chain



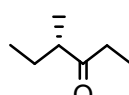
assassin bug
(alarm phe.)
ant (gland secretion)



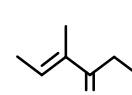
ant (alarm phe.)



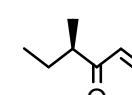
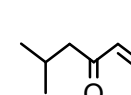
ant (alarm phe.)



ant (alarm phe.)
harvestman
(allomone)

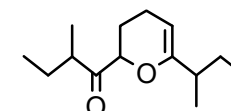
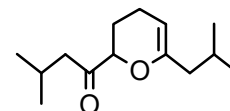


harvestman (allomone)



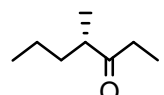
darkling beetle,
harvestman
(allomone?)

C6 chain dimer

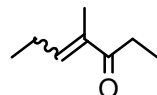


harvestman (allomone?)

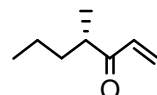
C7 chain



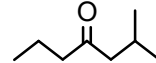
ant (alarm, trail phe.
gland secretion)
caddis fly (F sex phe.)
velvet ant, wasp, rove beetle,
harvestman (allomone)



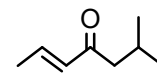
ant (gland secretion)



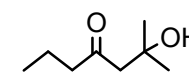
walking stick,
harvestman
(allomone)



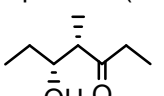
ant (alarm phe.)
bark beetle (M
aggregation phe.)



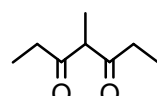
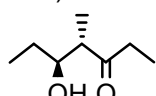
bark beetle (M aggregation phe.)



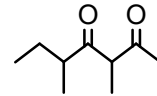
sitophinone (sitophilure)



weevil (M aggregation phe.)

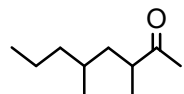


weevil (M
aggregation phe.)

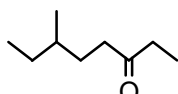


humpbacked fly
(F sex phe.)

C8 chain

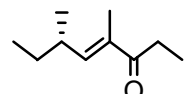


ant (alarm phe.?)

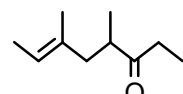


ant (alarm phe.,
gland secretion)

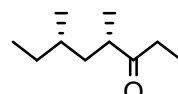
manicone



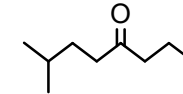
ant (alarm phe.)



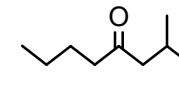
harvestman
(allomone)



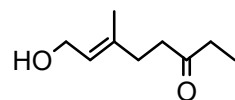
caddis fly
(F sex phe.)



mining bee
(gland secretion)



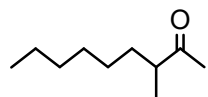
bark beetle (M
aggregation phe.)



leaf beetle
(M aggregation phe.)

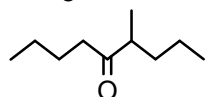
[B-4] Me-branched ketones (ii)

C9 chain

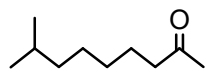


ant
(gland secretion)

ferruginone

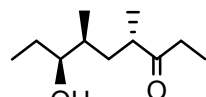


weevil (M
aggregation phe.)

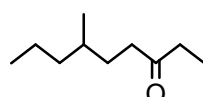


spider
(F sex phe.)

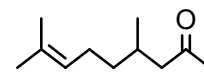
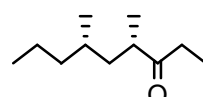
serricornin



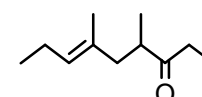
deathwatch beetle
(F sex phe.)



caddis fly (F sex phe.)

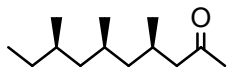


wasp (alam phe.)

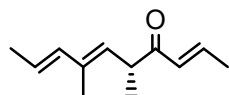


harvestman
(allomone)

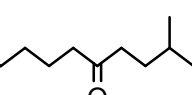
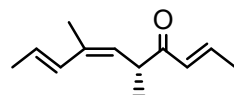
C10 chain
chortolure



storage mite
(aggregation phe.)

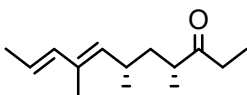


scale (F sex phe.)



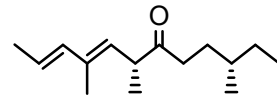
mining bee
(gland secretion)

C11 chain
graphisurone

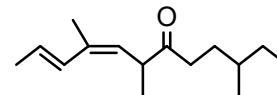


longhorn beetle
(M aggregation phe.)

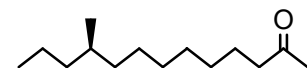
C12 chain



scale (F sex phe.)

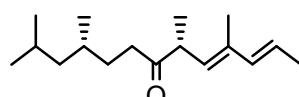


C13 chain



leaf beetle (F sex phe.)

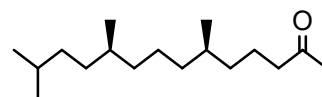
matsuone



scale (F sex phe.)

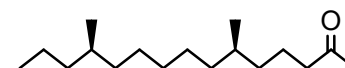
C14 chain

pallantione



stink bug (M sex phe.)

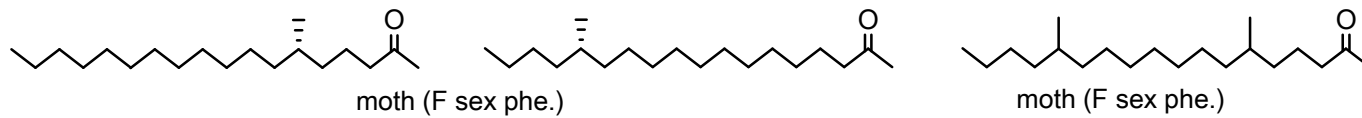
C15 chain



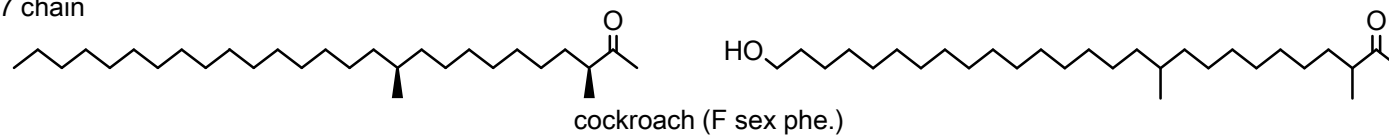
leaf beetle (F sex phe.)

[B-4] Me-branched ketones (iii)

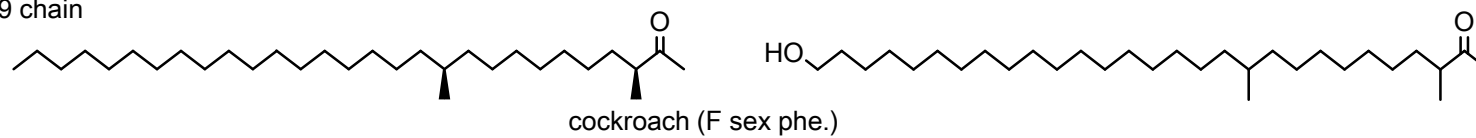
C18 chain



C27 chain

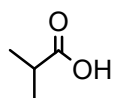


C29 chain

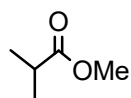


[B-5] Me-branched acids and derivatives (i)

C3 chain

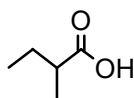


assassin bug (alarm, aggregation phe. ?)
butterfly (allomone ?)
tick (aggregation phe.)



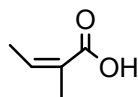
butterfly (allomone ?)

C4 chain



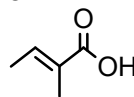
butterfly, ground beetle, leaf beetle, thrips (allomone)
ant (gland secretion)
moth (M sex phe. ?)

angelic acid



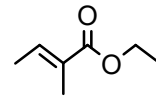
ground beetle (allomone ?)

tiglic acid



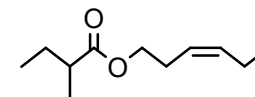
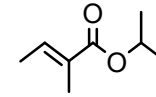
ground beetle, false ground beetle (allomone ?)

ethyl tiglate

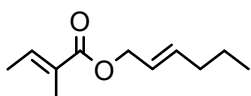


fruit fly (M aggregation phe.)

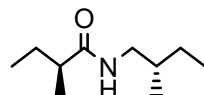
isopropyl tiglate



leaf beetle (allomone)

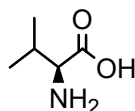


true bug (gland secretion)

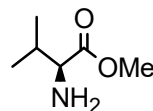


longhorn beetle (F sex phe.)

valine

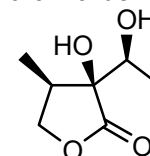


ant (allomone ?)



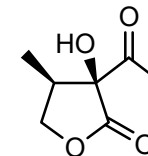
scarab beetle (F sex phe.)

Ithomiolide A

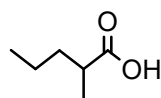


butterfly (M sex phe. ?)

Ithomiolide B

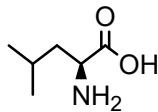


C5 chain

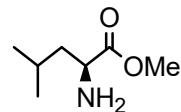


centipede (allomone ?)

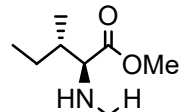
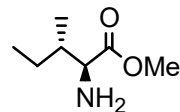
leucine



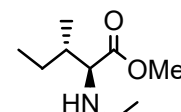
ant (allomone ?)



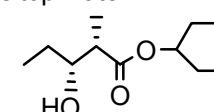
scarab beetle (F sex phe.)



scarab beetle (F sex phe.)

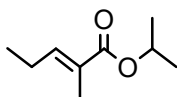


sitophilate



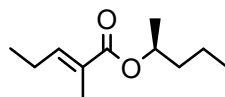
weevil (M aggregation phe.)

trunc-call 1

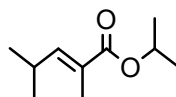


auger beetle (M aggregation phe.)

dominicalure 1

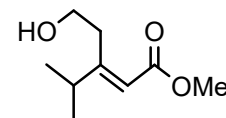
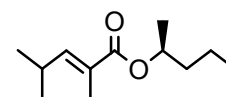


trunc-call 2



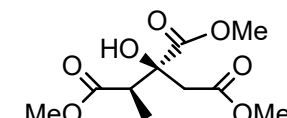
auger beetle (M aggregation phe.)

dominicalure 2



weevil (M sex phe.)

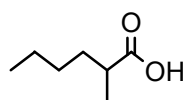
trimethyl methylcitrate



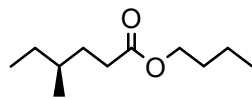
spider (F sex phe.)

[B-5] Me-branched acids and derivatives (ii)

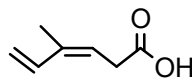
C6 chain



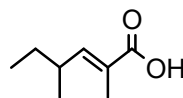
assassin bug
(alarm phe. ?)



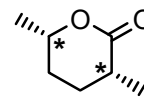
broad-headed bug
(aggregation phe.)



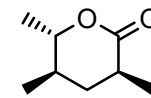
fruit fly
(M marking phe. ?)



ant
(allomone)

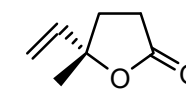


carpenter bee
(M gland secretion)



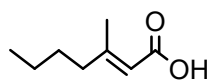
ant
(trail phe.)

lavender lactone

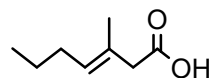
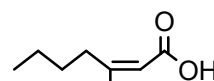


butterfly
(M sex phe. ?)

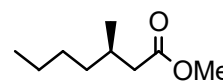
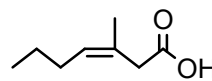
C7 chain



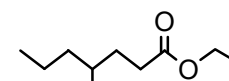
seed beetle (F sex phe.)



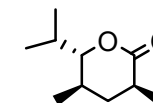
seed beetle (F sex phe.)



scarab beetle
(M sex phe.)

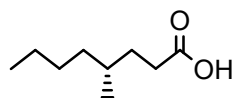


scarab beetle,
burying beetle
(M aggregation phe.)

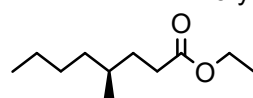


parasitoid wasp
(F sex phe.)

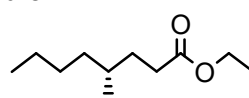
C8 chain



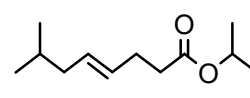
scarab beetle
(M aggregation phe.)



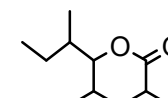
scarab beetle (M aggregation phe.)



oryctelure

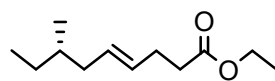


mealybug (F sex phe.)

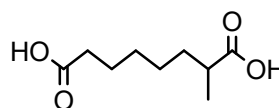
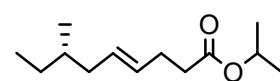


ant (trail phe.)

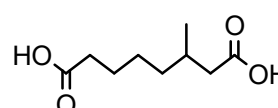
C9 chain



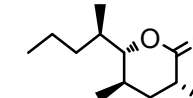
mealybug (F sex phe.)



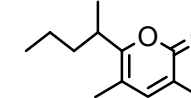
seed beetle (F secretion)



invictolide

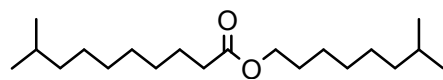


ant (queen
recognition phe.)



longhorn beetle
(M aggregation phe.)

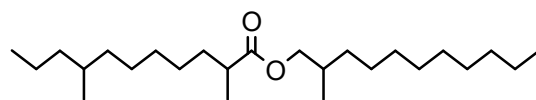
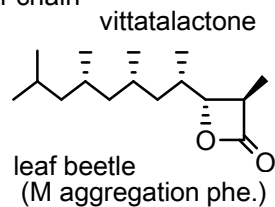
C10 chain



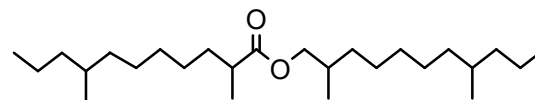
click beetle (F sex phe.)

[B-5] Me-branched acids and derivatives (iii)

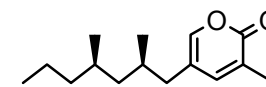
C11 chain



spider (F cuticular lipid)

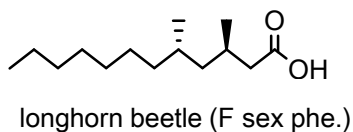


supellapyrone

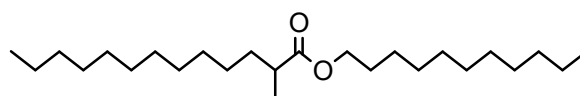


cockroach
(F sex phe.)

C12 chain

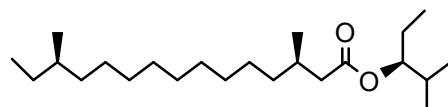


C13 chain

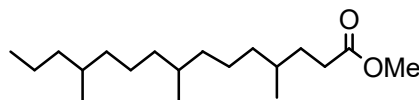


spider (M cuticular lipid)

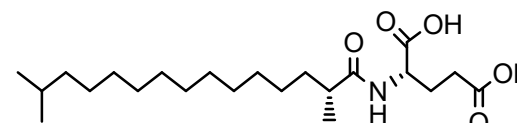
C15 chain



moth (F sex phe.)

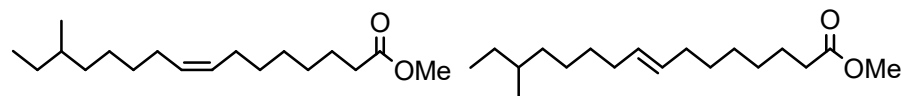


stink bug (M sex phe.)



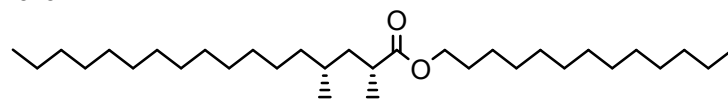
fruit fly (marking phe.)

C16 chain



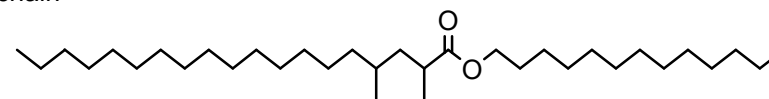
hide beetle (F sex phe.)

C17 chain



spider (M & F cuticular lipid)

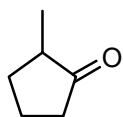
C19 chain



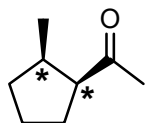
spider (F cuticular lipid)

[B-6] Me-branched ring compounds (i)

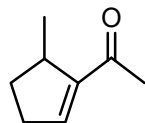
C5 ring



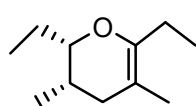
ant (alarm phe.)



ant (alarm phe.)

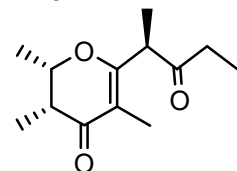


anhydro-serricornin

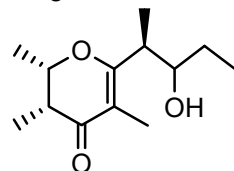


deathwatch beetle (F sex phe.)

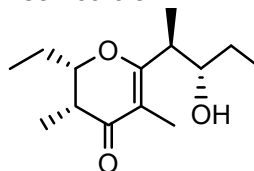
stegobinone



stegobiol

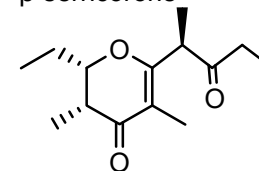


serricorole



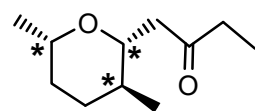
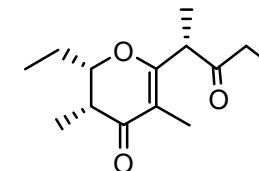
deathwatch beetle (F sex phe.)

β -serricorone



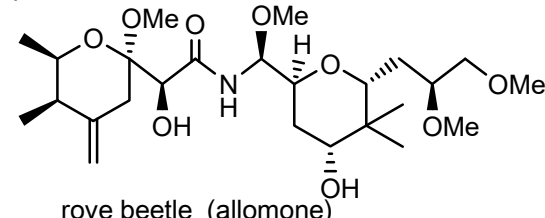
deathwatch beetle (F sex phe., marking phe.)

α -serricorone

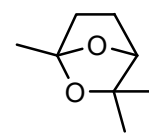


longhorned beetle (M aggregation phe.?)

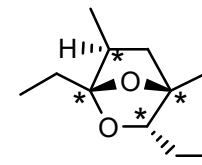
pederin



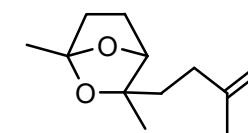
rove beetle (allomone)



ant, bee (gland secretion)



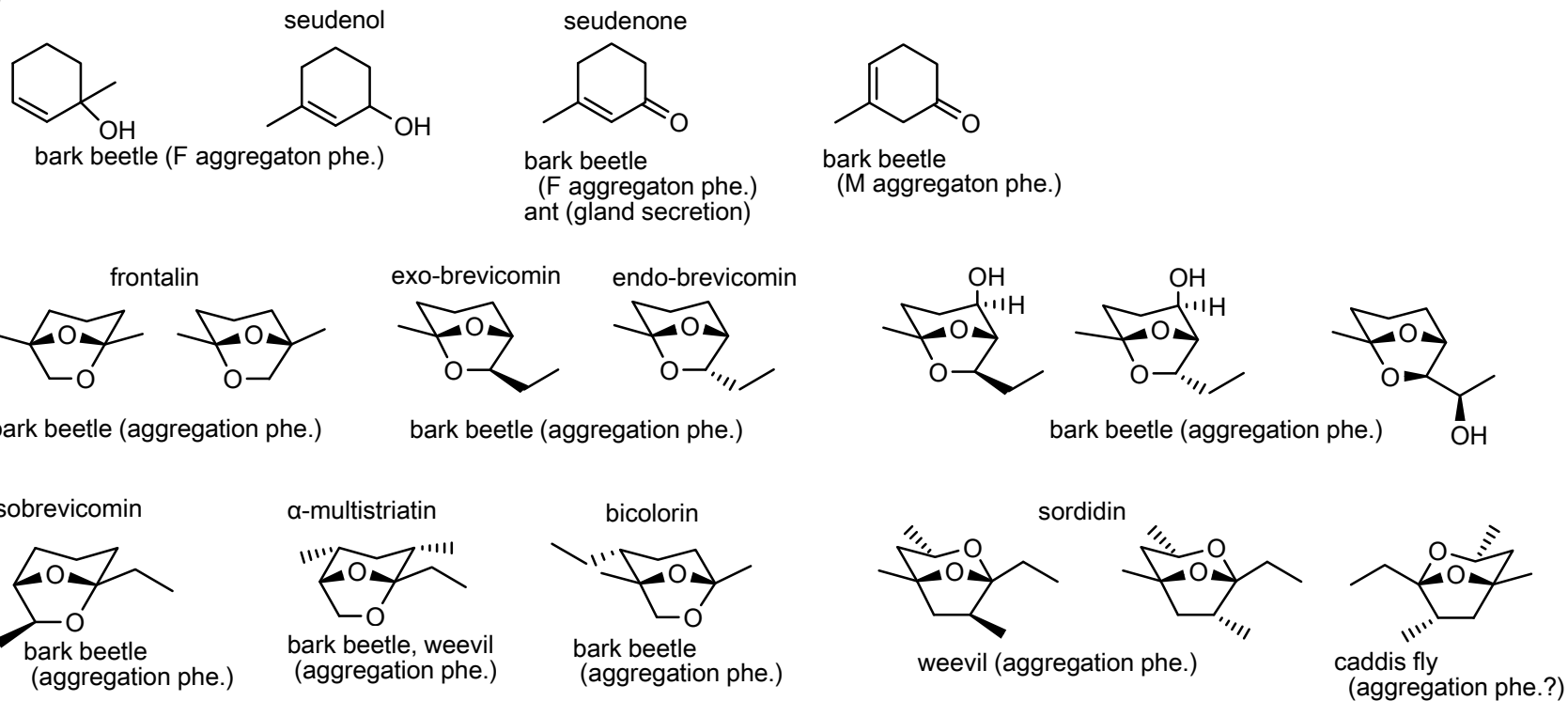
caddis fly (aggregation phe.?)



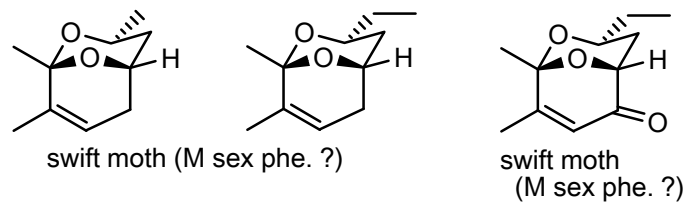
ant (gland secretion)

[B-6] Me-branched ring compounds (ii)

C6 ring



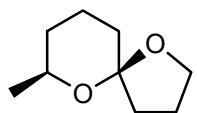
C7 ring



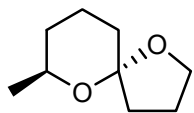
[B-6] Me-branched ring compounds (iii)

C8 ring

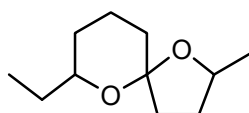
conophthorin



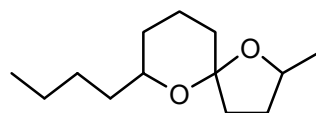
fruit fly
(M sex phe.)



wasp (allomone ?)
bark beetle (M sex phe.)

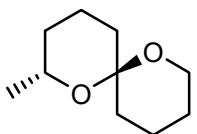


mining bee, leafcutter bee,
wasp (gland secretion)

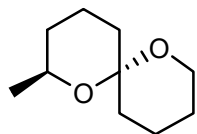


mining bee (gland secretion)

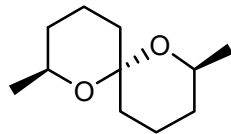
C9 ring



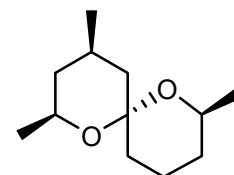
wasp
(gland secretion)



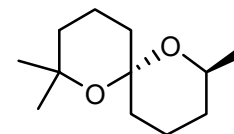
wasp (gland secretion)
walking stick (allomone)



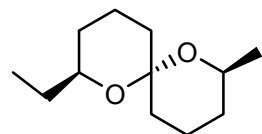
mining bee, fruit fly (sex phe.)
wasp (alarm phe.)
ant (gland secretion)
rove beetle (allomone)



shield bug
(aggregation phe.)



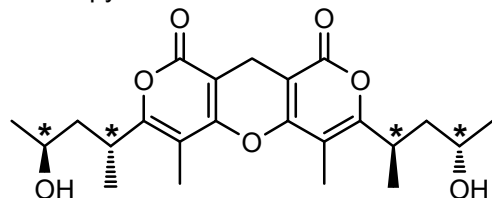
rove beetle (allomone)



fruit fly
(F or M sex phe.)

C11 ring

catalipyrone A



ladybug (allomone)

catalipyrone I

