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*Perl 5.42 News*

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# New features: Unicode 16

- 5,185 new characters
  - 3,995 Egyptian hieroglyphs
  - New scripts: Todhri, Garay, Tulu-Tigalari, Sunuwar, Gurung Khema, Kirat Rai, Ol Onal
  - 686 “Symbols for Legacy Computing Supplement”
  - Emoji:        

# New features: OO

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- `:writer` attribute on fields

```
class Foo {  
  field $bar :writer;  
  # method set_bar($x) { $bar = $x; $self }  
  
  field $baz :writer(mtfnpy);  
  # method mtfnpy($x) { $baz = $x; $self }  
}
```

# New features: OO

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- Lexical methods

```
class Foo {  
    my method foo() { ... }  
    method bar() {  
        $self->&foo();  
    }  
}
```

# New features: any/all operators

- `my $has_evens = any { $_ % 2 == 0 } @nums ;`
- `my $all_evens = all { $_ % 2 == 0 } @nums ;`
- Similar to `grep`
- Familiar to users of `List::Util`; now built in

# New features: $\wedge\wedge=$

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- $\wedge\wedge=$  compound logical xor assignment operator
- Similar to  $\&\&=$  and  $||=$

# Unremoval: ' package separator

- Use of ' as package separator (e.g. \$Some ' Package ' VERSION) was planned to be removed
- Now hidden behind apostrophe\_as\_package\_separator feature
- Enabled by default, but disabled after use v5.42;
- Still discouraged

# Unremoval: ~ (smartmatch)

- ~ was planned to be removed
- Now hidden behind smartmatch feature
- Enabled by default, but disabled after use v5.42;
- Still discouraged



# Diagnostics

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- “Possible precedence problem between ! and %s”
- !\$obj isa Some::Class
- !\$x eq \$y
- !\$x =~ /.../

# Diagnostics

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- “Useless use of %s in void context” for chained comparisons
- $0 < \$x < 1;$

# Modules

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- builtin:
  - Document perl version when each built-in function became available/stable
  - `inf/nan` throw runtime error if unavailable on platform

# Modules

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- ExtUtils::ParseXS
  - Massive clean-up and refactoring
  - New tests
  - Detects/rejects more invalid XS code

# Modules

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- B::Deparse: support ^^ (high-precedence xor)
- Fcntl: remove S\_ISENFMT ( )
- IPC::Open3/IPC::Open2: new calling syntax for using existing filehandles in lexical variables (not just barewords)
- Math::Complex: better parsing of complex numbers ('1+i', '123i', 'inf', '-inf', etc)

# Documentation

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- perlapi: combine documentation for related functions
- perldata: binary/octal floating-point constants documented (0b101.11p-1, 0o12.345p-2)
- perlfunc: document sort as stable, remove references to 'use sort'
- perlvar: document that \$# and \$\* trigger errors

# Miscellaneous

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- Inner subs no longer retain invisible references to all local variables in outer subs, avoiding invisible reference cycles/memory leaks
- Perl 5.40 issue

```
sub foo {  
    my ($x, $y) = (42, 123);  
    return sub { $x++ };  
}
```

# Miscellaneous

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- `$_SIG{__DIE__}` and `$_SIG{__WARN__}` cannot be invoked recursively anymore, as documented
- fixes weird behavior like C stack overflows



# Miscellaneous

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- `&CORE::chdir` fully supported (e.g. `my $ref = \&CORE::chdir`, etc)
- `chdir` returns booleans now (as documented), not integer 0/1

# Miscellaneous

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- 'bitwise' assignment operators return lvalues, like their non-bitwise counterparts:

```
use feature 'bitwise';  
($x &= $y) |= $z;  
($x &.= $y) |.= $z;
```

# Miscellaneous

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- ‘use v5.42’ defaults to ASCII source only (no bytes above 0x7F allowed)
- To allow UTF-8 source code, ‘use utf8’ or ‘use source::encoding “utf8”’

# Miscellaneous

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- Constant-folded strings are now COW-sharable
- `for my ($i, $x) (builtin::indexed ...)`  
optimized to not generate intermediate list

# Miscellaneous

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- “oldest bug on github” fixed ([perl5/799](#) from 1999-10-29, “Debugger: Break gets set on wrong subroutine”)

# Miscellaneous

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- shmread/shmwrite: no longer limited to 31-bit sizes/offsets
- shmread no longer calls FETCH before storing into a tied scalar
- shmread no longer leaks memory when reading into a reference

# Miscellaneous

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- `substr($x, 0, ...)` special-cased, potentially faster
- `reverse($string)` potentially faster, especially non-Unicode strings

# Miscellaneous

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- Regex backreference syntax: `/\g{123}random garbage/` properly rejected



# The End

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- Thank you!
- Perl 5.42.0 is planned to be released  
*Real Soon Now: 2025-05-20*
- Release Candidate testers welcome! See  
<https://lists.perl.org/list/perl5-porters.html>

